# Virginia Wildlife

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# Virginia Wildlife

*Dedicated to the Conservation of Virginia's Wildlife and Related Natural Resources and to the Betterment of Outdoor Recreation in Virginia*

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**JUNE**

**Volume XXVIII/No. 6**


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**COVER:** The wood duck, most colorful of American waterfowl, nests throughout most of Virginia wherever maturing stands of hardwood timber and wetlands are to be found. There is more about "woodies" on page 10. Our artist: Charles L. Ripper, Huntington, West Virginia.


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EDITORIAL

# Let's Keep the Record Straight

A dam in the throat of the gorge of the Jackson River, on the Gathright Wildlife Management Area, is going to built. Preliminary construction work—building of an access road, and some excavation at the dam site—will begin this summer.

It is well to remember that this is not a newly conceived project, undertaken suddenly in 1967 as a result of bureaucratic whim or impulsive decision. Young men have grown gray since such a dam was first authorized by Congress in 1946. and a lot of water has poured through the gorge while the project has been studied and its merits debated from every angle.

Hunters and trout fishermen, who know the rushing Jackson and its gorge and the Game Commission's Gathright Wildlife Management Area to be among the most productive and attractive public hunting and fishing facilities in the world. hated to think of seeing this property. purchased with their hunting and fishing license money, drowned under a vast impoundment of slack water. Some of their views were expressed editorially on this page in the December 1961 issue of *Virginia Wildlife*.

That was five and a half years ago. Perhaps not many minds were changed by the ensuing debate. but now a decision has been made. The dam will be built. The final decision. of course, was neither the Game Commission's nor the Corps of Engineers' to make.

The right to dissent is a precious right that ought to be guarded at all costs. But like all other rights. it can be abused. Specifically, the right to dissent is abused whenever in practice it is exercised as a right to obstruct. after a decision has been reached at the proper level by duly prescribed process.

The decision to build the dam already having been made, the Commission issued the U. S. Army Corps of Engineers a right-of-entry upon its Gathright property to permit preliminary construction work to begin. Negotiations will be continued. to determine the price finally to be paid for the Commission land needed for the project. The right-of-entry in no way prejudices the outcome of these negotiations.

Commenting on both the right-of-entry agreement and the continuing negotiations, Commission Chairman J. Cargill Johnson said:

"Our Gathright property was purchased with money from the game protection fund, a special fund derived from hunting and fishing license sales with no general tax money involved. The General Assembly is going to be asked next year to approve the transfer of the most highly valued portions of this magnificent public hunting area to the federal government for a multiple-purpose water impoundment project. In fairness to the interests of the sportsmen of Virginia, who paid for the property, the State's asking price should cover the expected cost to us of replacing 'in kind' the sacrificed hunting opportunities and wildlife values by acquisition of equivalent property elsewhere. This is the only matter we have been negotiating with the Corps of Engineers. and our discussions with Corps representatives have been marked at all times by a cordial. understanding and cooperative spirit on both sides."

The interests of the sportsmen of Virginia are not being "sold out" to the Corps of Engineers in any "under-the-table deal." Neither is there the slightest justification for the opposing charge that "obstructionist tactics" have been employed to thwart the duly constituted decision-making process.—J. F. Mc.

## LETTERS

YOUR editorial in the January issue of *Virginia Wildlife* came to mind as I was spending a few hours on the river one afternoon. My nineteen-year-old daughter and I took a walk to Snake Castle Rapids on the Rappahannock River, eight miles downstream from Kellys Ford on the Fauquier County side. We sat high on a miniature Gibraltar, and gazed down at the beautiful, remote, natural scene below.

There are those today who are determined to destroy this section of natural beauty by erecting the proposed Salem Church Dam, in order to attract people to "outdoor facilities that attract crowds of people seeking to escape crowds."

If those who are determined to spend big federal money in Virginia succeed in this project, we who enjoy these serene natural parks and rivers will be denied forever the composure and peace that this God-given area affords.

*Thomas D. Jones*
Warrenton

I WISH you would print this picture of me and my first buck in the magazine, as a surprise for my husband.

Although I am 53 years old I still love to hunt as I was raised with brothers in Floyd County, Virginia. I have killed rabbits and squirrels, and have been deer hunting before, but last Thanksgiving was my lucky day.

*Mrs. J. R. Boitnott*
Roanoke

I AM enclosing a photograph showing a young buck drowned in an abandoned well near Jarratt in Greensville County. You have my permission to use it in *Virginia Wildlife*, calling on all landowners to fill in their abandoned wells. The deer was discovered by two Jarratt boys. The two boys rescued a pet dog from this well. The man who leases the farm has indicated that he will fill this well.

*Philip H. Dale*
Jarratt

*Unused wells should be filled, or securely sealed. A small child could have met the same fate as this spike buck.—Ed.*

# THE GOSHEN-LITTLE NORTH MOUNTAIN OUTDOOR RECREATION AREA

## *A Proposal*

By JAMES W. ENGLE, JR.
*Game Commission Forester*

*"The Study Commission learned in its own explorations, and heard at all public hearings, of the need . . . to coordinate the great number of . . . programs concerned with different aspects of Virginia's outdoor recreation resources. The absence of this coordination causes gaps and overlaps and makes exceedingly difficult the practical and economical treatment of resources and needs."* *

WELL said, indeed! But what, exactly, can "coordination" accomplish, in terms of developing and exploiting the *particular* recreation possibilities offered by an existing resource?

Come along with me some day, out between Goshen Pass and Little North Mountain, where vast outdoor recreation possibilities beckon, and I will show you.

The Commission of Game and Inland Fisheries owns approximately 32,255 continuous acres of mountain land in western Augusta and Rockbridge Counties. Land purchases in two management areas over the past six years have resulted in continuous ownership of this area 32 miles in length.

Upon completion of Interstate 64, the area will be just two hours west of Richmond. It is now only an hour's drive from Roanoke or Lynchburg. The tract extends from a point south of Route 60 (highway between Lexington and Clifton Forge) to Buffalo Gap, just seven miles west of Staunton.

Other public lands adjoin these two management areas. The Virginia Division of Parks owns a 900 acre Natural Area in Goshen Pass, surrounded by Game Commission land. The Virginia Department of Highways owns a 500 foot corridor through Goshen Pass, adjoining the Game Commission and Park lands. The U. S. Forest Service owns about 700 acres at the mouth of Gouchenour Branch, controlling public access to the west side of the Goshen Wildlife Management Area.

*A consistent and coordinated land use concept applied to these 34,000 acres as a whole would result in increased man days of use and benefit to the public.*

Let's briefly examine each of these areas and their present use:

The Goshen Wildlife Management Area contains approximately 16,000 acres. It was purchased with money provided by hunters and fishermen—no general fund money was used. In keeping with "fund integrity," hunting and fishing are the primary intended uses of this land. Timber sales, reforestation, and prescribed burning have been practiced on this area, not primarily as income deriving functions, but as wildlife habitat manipulations. Annual plans prescribe the cutting of timber on 225 acres each year.

ESTIMATED MAN DAYS USE 1965-66
GOSHEN-LITTLE NORTH MOUNTAIN
WILDLIFE MANAGEMENT AREAS

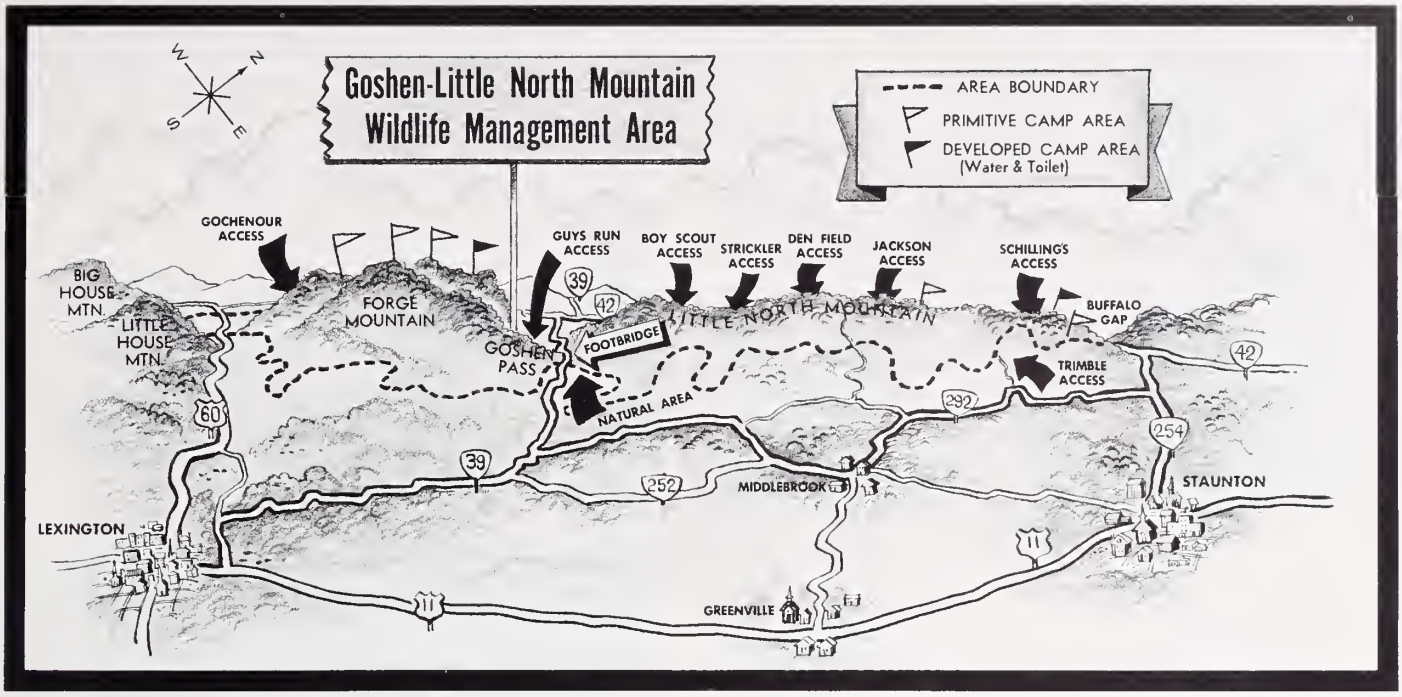
| | *Hunting* | *Fishing* | *Camping* | *Hiking-Trail Riding* |
|---|---|---|---|---|
| Goshen | 2710 | 85 | 310 | 950 |
| Little N. Mtn. | 2365 | — | 110 | 1300 |

Total—7,830 Man Days Use

Little North Mountain is similar in acreage, although long and narrow. Its terrain is not nearly as steep and rough, nor does it have the rock cliffs found on the Goshen Area. Its present land use pattern is almost identical to Goshen, but it lacks streams and thus does not furnish native trout fishing as does the Goshen tract.

The Natural Area of 900 acres—Virginia Division of Parks—was a gift from Hunter Perry, Lillian Perry Edwards, and the Perry Foundation, Charlottesville, in 1954. It was acquired by the Foundation to preserve the scenic beauty of Goshen Pass. The beauty of rhododendron in bloom in the spring, fall leaves, and turbulent white water over rock boulders, is unsurpassed. With its present designation, it may be looked at and admired. The nature of its

*VIRGINIA'S COMMONWEALTH: A STUDY OF VIRGINIA'S OUTDOOR RECREATION RESOURCES *and* THE VIRGINIA OUTDOORS PLAN FOR CONSERVING AND DEVELOPING THEM FOR THE LASTING PUBLIC BENEFIT, Virginia Outdoor Recreation Study Commission, 1965.



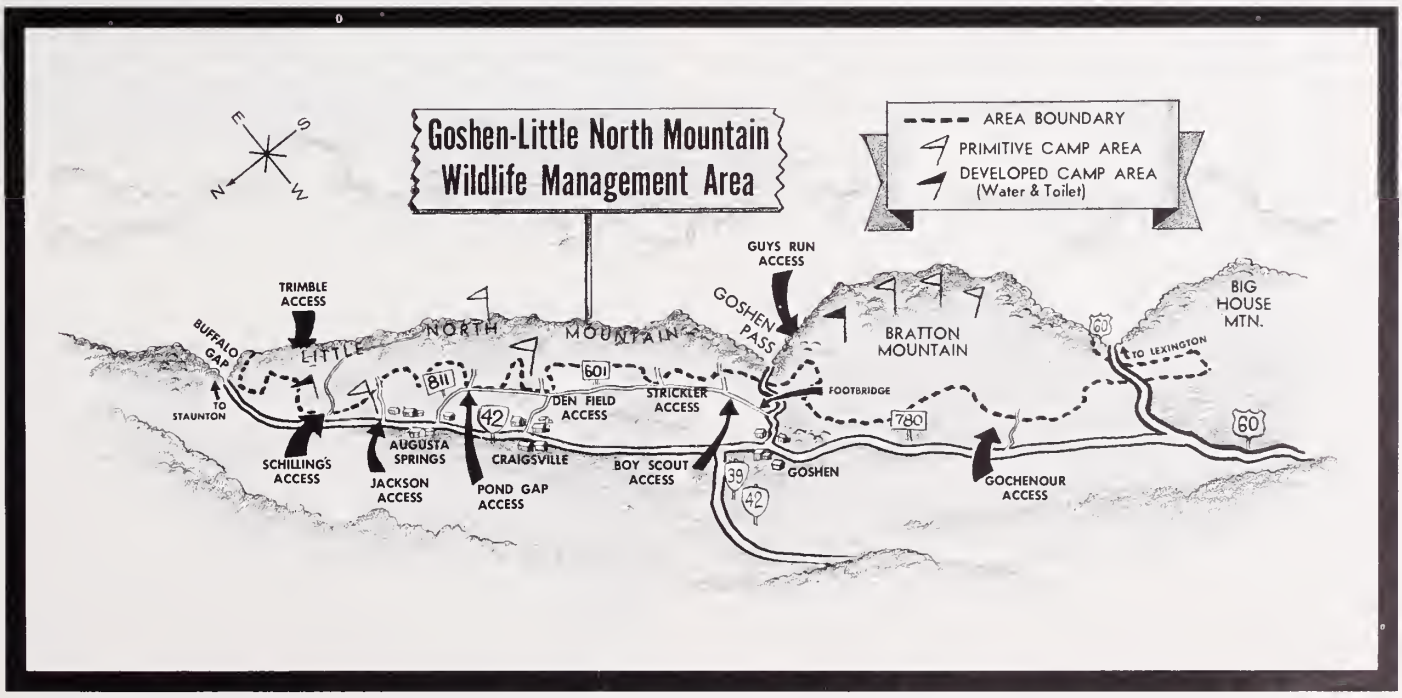

terrain discourages most if not all hikers, and it is closed to hunting.

The Virginia Department of Highways owns an estimated 200 acres through Goshen Pass. Its ownership is from the water's edge of the Maury River to a point 200 feet south and west of the center line of Route 39. A picnic area and restroom facilities maintained by the Highway Department receive heavy use during the warm months.

The U. S. Forest Service land of approximately 700 acres at the mouth of Gouchenour Branch, adjoining State Route 780, has a connecting low quality access road to the west side of the Goshen Management Area. The tract has been designated in Forest Service long-range plans as a potential recreation area. It contains some tall white pines and a few oaks of large size. The stream contains native trout. Several thinning and intermediate timber sales have been made on the area.

A coordinated approach to the development and management of all these separate but adjacent tracts would greatly enhance the recreation value of each of them. No agency need abandon its primary land-use patterns, yet each agency might slightly modify its present policies in seeking greater unity of purpose and consistency of action.

The U. S. Forest Service, under a coordinated plan, might re-examine plans and priorities for its own projected recreational area, and initiate action at an early date to start construction and development. Improving the present Forest Service road would make the Game Commission lands more available for hikers, trail riders, and sportsmen. A camp ground and picnic area would serve not just summer



visitors, but also sportsmen in the fall.

The Division of Parks' Natural Area could be more readily used and enjoyed if a trail system were to be established. A suspension foot bridge, built by the Game Commission with Rockbridge County excess bear and deer damage stamp funds, across the Maury River in the head of the Pass, probably will remain the only easy access to this rugged area. Due to its terrain, this Natural Area will never be used by as many people as will view it from a distance. It contains some of the roughest cliffs, caves, and rock outcroppings found in the western part of the state. This 900-acre game sanctuary in the midst of 32,000-34,000 acres of public hunting land is not in keeping with modern day game management concepts, and it constitutes something of a potential trap for the stranger who comes to hunt the Goshen area and is unaware of the Natural Area's special status. The presently increasing deer herd in this sanctuary already is a threat to certain native plants now growing there. To invite a little more summer's use by providing trails, and to open the area to hunting in the fall, would benefit all concerned.

The Game Commission's land probably provides the biggest incentive for a multiple agency, multiple use development program. Of first consideration is the amount of pure outdoor SPACE involved—some 32,000 acres. But there are other considerations. There are relics of a historic old iron furnace on Commission land adjacent to Route 601 in Estaline Valley, and two other furnace sites exist at other locations. In the upper end of Goshen Pass are the remains of an old foundry, dam, canal remains and outlines of buildings and chimneys. Scattered over the whole area are remains of iron digging of yesteryear, from Buffalo Gap to Forge Mountain. It is an interesting and rewarding area to explore on foot.

The National Area Council of the Boy Scouts of America is developing their adjoining 4,000 acres with camping units and a 138 acre lake on the little Calf Pasture River. It is expected that 50,000 boys a summer will be using their lands over a seven-week period starting in late June each year. Details are yet to be finalized, but the Scouts will be granted privileges of foot trail construction for hiking and overnight camping on Game Commission lands. In turn these trails will help to distribute the hunters in the fall of the year.

The interests of sportsmen are the first concern of the Game Commission. It was their money that purchased Game Commission lands. Few sportsmen object to other uses of their land, so long as they are compatible with the primary purpose. However, the Game Commission and its personnel are not in either the *general* outdoor recreation, forestry, or road building business. Sister agencies in the conservation field do serve these interests, and the serving of such interests on *all* suitable public-owned lands would seem to be a natural extension of the function of these agencies.

There is an opportunity for the development of 14 miles of scenic drives—"Little Skyline Drives"—and picnic areas in the high country away from the river. An additional 50 miles of access roads are needed for hunter distribution, timber sales, forest fire control and general administration of the area. Such a road system coupled with a proposed 52 mile foot trail system for hikers, sportsmen, and trail riders would benefit more than just one group interested in the outdoors.

Just north, and adjoining Goshen Pass, on the northwest side of Route 39, the Game Commission has acquired an approximately 180-acre tract of land adjoining the large wildlife management unit. The terrain is rolling and provides probably the only area of sufficient size to establish a family type camp ground. Such an area would have year around accessibility and provide use for campers, hikers, fishermen, hunters and vacationists.

The foregoing is not intended as a complete list of possibilities for these 34,000 acres. It is a start, a suggestion, to stimulate thinking by conservation minded groups throughout the state. Nor is it intended to suggest that the whole area be made into one big picnic ground; but rather to show how the hunter, fisherman, naturalist, vacationist and sightseer could all be provided with greater opportunities to use and enjoy this area that we are so fortunate to possess.

Commission photo by Kesteloo

**The wild beauty of Goshen Pass, where Route 39 threads its way along the gorge of the Maury River, is unsurpassed.**

A joint effort by four governmental agencies (both state and federal) could set a precedent here in coordinating outdoor recreation and resource management, and provide a model worthy of emulation wherever similar opportunities exist throughout the state and nation. Each agency would do its share, and maybe a little more, for its own "constituents," and even modify to a certain extent some of its present plans and policies for the benefit of all. The Goshen-Little North Mountain area seems to offer a natural opportunity to put THE VIRGINIA OUTDOORS PLAN into action, by initiating a broad outdoor development coordinated under the leadership of the newly established Commission of Outdoor Recreation.

# INTERESTING FACTS ABOUT WILDLIFE

By RALPH C. CLIFFORD
*Plano, Illinois*

Compared to their adult size, bear cubs are about the tiniest of mammals at birth.

Commission photo by Kesteloo

As an outdoorsman, how many facts related herewith concerning America's wild creatures have you learned, or read somewhere and then checked out for fun? As a hunter, trapper, fisherman and one-time prospector, I've been observing the wondrous ways of nature for forty-odd years, and have been amply rewarded. Today, I enjoy a local reputation as an amateur naturalist, and am pleased when able to answer questions of sportsmen, youth groups and so on. Very probably, all I've learned has been written and authenticated; if so, however, such writings are certainly not widely read by the vast majority of outdoor lovers.

So find a pencil, get comfortable in the old armchair, and score yourself with, "Yes, I knew that," or "Gosh, I didn't," or better still, "This guy Clifford is talking through his hat; I'm going to get out and prove him wrong!" This latter will give you plenty of exercise and considerable pleasure.

. . . . Considering their adult size, bear cubs are tiniest of all North American mammals at birth, rarely weighing over eight ounces. And bears, like human beings, will shed tears of grief. . . . In the North, deer drop their summer coats and grow special ones for winter. Each hair is like a small tube, sealed at the outer point, and retains much heat. Also, when hunting deer, you'll probably never see one if scent of perfumed soap, hair tonic, etc., is strong on your person. . . . Moose, weighing up to 1800 pounds, are thought to be the fastest growing wild animals; calves gain two pounds daily the first month, and about four per day thereafter. And a full grown bull's antlers can weigh 85 pounds. . . . The red fox, perhaps wiliest of woodland creatures and avidly pursued by many of us, is not native to America. It was imported from England in 1779, and followed civilization across the country. In trapping foxes, you'll never catch one if man scent is not carefully obliterated in making sets. . . . A raccoon's reputation about fastidiously washing his food before eating is unearned. Poorly developed saliva glands cause him to seek water in which to dunk his eats, thus easing an extremely dry throat. . . . Many hunters consider the wild boar of mountainous east Tennessee and North Carolina the most vicious and unpredictable game of all. It has a thick cartilaginous plate over its shoulders, and awful tusks. Plenty of hunting dogs are lost to wild boars at hay every year. A shot that would stop a deer cold often won't even slow down one of these beasts. Reports show that about 13,000 were taken in 1965. . . . The common red squirrel, credited with ability to always find the caches of nuts and acorns he's forever storing for winter, is in reality such a nitwit at times that he can't spot a walnut in a box of birdseed. Apparently, he forgets the hidden hoards immediately. (This took me two years to be sure of, and is a story in itself.)

. . . . Most courageous loyalty in nature is that of the Canada goose. These great birds mate for life, and will sometimes fly into hunters' guns, honking crazily, in attempting to reach a fallen mate. This is about the saddest sight in hunting—if their instincts are understood. . . . Eagles use the same nests year after year, and keep adding to them. One was occupied continuously for 36 years, was over 9 feet across its top and 20 deep. Contrast this with the dainty hummingbird. Its nest of plant down and spider webs is often not more than one inch in diameter. . . . Mourning doves are the only birds I've ever seen who can swallow with their bills straight down. (There may be others.) . . . . Wood ducks regularly dine on acorns. And black ducks are the wariest, wildest and wisest of our waterfowl. . . . The ruffed grouse, braving the rigors of winter, grows his own snowshoes of feathers, and thrives on twigs and dead leaves. A reckless flyer, he'll crash right through brush and tree branches. . . . Crows are the woodland birds I'm most indebted to. This so-called worthless fellow is very wily, raucous, nosey, and likes to take part in whatever is going on. Countless times through the years, on investigating excited, cawing flocks in distant tree tops, when cover was dense enough for me to move up unseen, I've witnessed many interesting dramas. It has been my good fortune to watch about everything, from a hawk trying to make off with baby squirrels from a tough old mother's nest, to bull moose fighting during the rutting season.

. . . . The bigest northern pike, bass and walleyes are caught just before freeze-up in northern waters because instinct makes them feed practically all the time then, to prepare for slim pickings under winter ice. But this is not true of muskies. . . . A big muskie will stake out his territory, and remain there, usually running all others ragged. One weighing 60 pounds or so will be over 20 years old. . . . Bullfrogs will be inspired into nocturnal concerts by noises, such as thunder, heavy rain, or the roar of diesel motors in river-barge tugs. . . . Catfish and bullheads hibernate in deep-mud shallows, usually about the time ice is forming. . . . The white bass, a scrappy little fellow of up to five pounds, is the best and most easily transplanted fish for stocking artificial ponds. It grows fast and is quite tasty. . . . Brown trout, generally speaking, can withstand worse pollution than any other trout. It is not native to this country, having come from Germany to a Long Island hatchery in 1883.

To digress, Americans drink about 430 million cups of coffee per day. I like mine, too, and prefer it boiled in a can, hanging at one end of a green stick propped up over a campfire. How do you score yourself on this?

Twentieth in the series of articles on some of the favorite angling hot spots in Virginia.

# The Amazing Upper James

By BILL COCHRAN
*Roanoke*

THE upper James River, as it flows through Botetourt and Rockbridge counties, is a superb smallmouth bass fishing stream.

As one of its regular fishermen, there are several things about the river that never fail to amaze me. It is a stream of striking natural beauty. It contains large numbers of acrobatic, roughneck smallmouth bass. Yet, it attracts only scant numbers of fishermen.

Why so many bass are left to so few fishermen is something I have pondered over on many occasions. Basically, I believe there are two reasons the upper James is underfished and underrated.

For one thing, it is polluted. It occasionally stinks, and the water is always dirty looking and foamy, and sometimes when drought chokes it in the summertime the fish aren't fit to eat.

This stream, and all others that are polluted, will continue to wallow in filth until recreation users of water decide they aren't content with just what industry and municipalities happen to want to leave them coming down the river bed.

For another thing, the upper James is difficult—sometimes downright tough—to fish. The bank fisherman is limited to what small open places he might find along the river. If he tries walking the bank and fishing various spots here and there, the chances are good he'll find himself greatly hampered by thick brush, not to mention a sprinkling of posted signs.

If the fisherman tries to wade and fish, likely as not he'll slip on one of the James' famous super-slick rocks, or unable to see because of the pollution-darkened water, he'll step in a deep hole and suddenly find his hat floating off downstream.

Much of the upper James, unlike the mighty river when it reaches Chesapeake Bay, is really too small and rocky and contains too many rapids for the average fishing boat, so this hampers the boat-fishing approach.

Phillip Poff plays an acrobatic bass that fell for his lure on the upper James.

There is really but one way to fully fish large stretches of the upper river, and that is by floating it in a canoe. Unfortunately, few people know enough about a canoe or the James to successfully try this approach, but those who do can clean up on smallmouth bass, and bluegill, when they find these fighters in a feeding mood.

Among the handful of anglers who successfully float-fish the upper James are Fred Tanner, Phillip Poff and Boots Elliott. The trio, all from Roanoke, are as close as the nursery rhyme "three men in a tub," and it's not very often they take a stranger under wing. But occasionally, when one of them is detained by work, I manage to weasel in as a substitute.

Whenever I do, it is a delightful experience for me. I become Huckleberry Finn for the day, on a sweeping adventure, just floatin' down the river and soaking up the glories of nature en route.

A big part of those glories are large, saucy smallmouth bass. The river is thick with them, weighing all the way up

Phillip Poff avoids brushy banks and scattered posted signs by floating the James in a canoe.

to the five-pound class, which is a very good class indeed. Fred, Phillip and Boots occasionally catch and release 50 bass on a day's float.

Everytime I float the James I feel "bassy" all over. I can't explain it. It's just something the James does to you. You know you are going to catch fish.

On one fishing excursion with Fred and Phillip, we put in below Eagle Rock and floated to Buchanan. Working the canoe within a cast of shore, we began sending our flyrod bugs to the edge of the water weeds along the river bank.

A fly rod with a tapered bugging line is a good tool to use on a James float. Productive lures are bugs; both deerhair and popping bugs. We spurt, sputter, jiggle, twitch, jump, wobble, weave and pop them at the edge of weed beds in a tantalizing way bass find hard to resist.

I was using a deerhair bug and had made no more than half-a-dozen casts when the first strike came. One of those bronze, almost black, river bass had grabbed my bug and was going with it. I struck hard. There was a jolting impact. The smallmouth got a grip on the water with his wide tail and ripped up and out to take a look at me. I managed to wear him down, work him to the canoe, then release him.

About then I heard roaring rapids. I looked and there was rough-looking white water ahead. I secured my rod and camera in the canoe and held on. I began to wonder how much it would cost to get a wet camera fixed.

"I'll need some help on this one," Phillip, who was handling the canoe from the stern, told Fred.

Fred, in the bow, took a paddle and both men headed the canoe into the foaming white rapids. I prepared for a dunking. But the canoe glided through as easily as an airplane sails through a cloud, and I was relaxed again.

No one should attempt to float the James unless he is an accomplished canoeist. It can be tricky. Fred, Phillip and Boots float it so often—after bass in the summer and ducks in the winter—that they know every rapid and seemingly every menacing looking rock.

There is really no better way to fish many streams than by floating them. Few outdoor adventures can match the pleasure and rewards of lazily letting the current take you downstream as you cast to new pools and riffles. Such trips take you away from the crowds and transfer you into a new world of adventure, even though the stream you travel is at the doorstep of thousands of people.

Yet, strangely enough, countless fishermen never consider taking a float trip despite the fact suitable streams are within a short distance of every fisherman in the state.

One can never really appreciate the beauty of the upper James unless he floats it. A man could be content just to float and look, not fish. Fred, Phillip and I glided leisurely grasping new vistas of scenic beauty around each bend, sending our bugs to a new spot with each cast.

Fred caught a small bass and several spunky bluegills with a fly rod Hula Popper; then he hooked a fine bass.

It went deep, displaying some rough-house tactics before taking to the air in several pulse-quickening jumps. Fred held on. You don't rush a James River bass.

A week before he landed one weighing 4½ pounds; however, this one wouldn't sink the scales quite that much. But he came reluctantly to the canoe. Fred held him up for us to see, then released him saying, "not a bad river bass."

Later Phillip caught a good fish after he began to Gypsy

Fred Tanner hooks a bass that brings a grin to his face.

Rose Lee his popping bug across the surface in a seductive manner. The catch was a smallmouth wearing bronze armor and fire in his eyes. It was a fish we estimated to be just under four pounds.

Releasing it, Phillip said, "Go back to your home and be fruitful and multiply." Likely as not, that old bass did.

Fred, Phillip and Boots float various parts of the James from above Eagle Rock to below Rocky Point. They take two cars, floating the distance from one to the other. Seldom do they see many other fishermen along the way.

This day, Fred, Phillip and I saw five fishermen. There were four as we passed Springwood, and there was one where we took out at Buchanan.

When the bridge at Buchanan loomed up and we'd caught and released fish till our arms were tired, we went ashore near where a bank angler fished.

"Catch anything?" we asked.

"Naw, ain't caught a one," he said. "The river is fished to death. People come from all over."

We agreed. We'd seen less than one fisherman for every two miles we traveled—and that was a busy day for the James.

The upper James produces big, black smallmouth bass.

# WOOD DUCK

By HAROLD H. PRINCE
*Virginia Polytechnic Institute, Blacksburg*

Photos by Karl H. Maslowski

THE wood duck is a common resident of Virginia streams and woodlands located near water. "Woodies" are, to many naturalists and outdoorsmen, the most beautiful of all our ducks. Their feathers are eagerly sought by fishermen for artificial trout flies. Wood ducks are found over most of the United States east of the Mississippi River, including the southern part of Canada. You may also encounter them along the West Coast in California, Oregon, and Washington.

The wood duck's nest is located in a tree cavity, of all places, anywhere from 3 to 60 feet above the ground. Most of the other ducks nest on the ground. Some cavities may be up to 70 inches deep, but most are much shallower. The female lays from 9 to 14 eggs and lines her nest with soft down feathers that she plucks from her breast while incubating. She incubates the eggs for about 30 days before the ducklings break their eggshells. The ducklings leave their sheltered tree nests the day after hatching, probably because their mother does not feed them.

The manner in which the ducklings leave the nest was a matter of controversy for many years. Most observers now agree that the female inspects the surrounding area from the cavity entrance and, when all is clear, flies to the ground and calls to the ducklings. This is the signal for the ducklings to leave. They climb up the side of the cavity, aided by their sharp toenails and a hook on the tip of their bill, and jump. The female cannot count, and when they stop jumping from the cavity she leads them to water.

Sometimes weaker ducklings are unable to leave the cavity and shortly thereafter die from starvation and chilling. Few ducklings appear to be injured after their fall to the ground, even from a height of 60 feet. In seven or eight weeks the young are able to fly and are on their own, faced with the challenges of survival.

A female wood duck leaves her nest in hollow sycamore.

Wood ducks were on the verge of extinction around 1900. They were on the protected list from 1918 to 1941, when restricted hunting was again permitted. Today, they are probably more plentiful than at any time in the last century.

There are many reasons for the high woodie population. First, the nesting range of the wood duck is in areas not affected by the drought conditions of recent years in the "duck factory" of South-Central Canada. Second, wood ducks have developed a tolerance for man and his activities, and it is not uncommon to find them nesting within the city limits in many areas, perhaps in your own back yard. Third, the woodie has adapted its feeding habits to modern agriculture.

In addition to such foods as aquatic plants and acorns, they have developed the habit of often feeding in fields of corn and other agricultural crops during autumn. Last, man has also aided the wood duck by building nest boxes and placing them in areas where there are few natural cavities. This has helped bring the wood duck back to many areas where the large trees with nest cavities were destroyed.

YOU can also help the wood duck by (1) making nest boxes (Building homes for wood ducks could be an excellent project for a scout troop, 4-H Club, or school shop class, particularly in localities near rivers, ponds, marshes, and reservoirs.); (2) not cutting the large trees that might contain a nest cavity this spring.

Write the Wildlife Specialist, Agricultural Extension Service, Virginia Polytechnic Institute, Blacksburg, if you desire plans for constructing nest boxes for wood ducks.

When it comes to colorful plumage, the adult male wood duck is second to none among American waterfowl.

# *Return of the Squirrels*

THE happiest event of this summer for us was the return of the squirrels. When we first moved up on the hill, we enjoyed the antics of the bushy-tailed natives and even had one tamed to claim his daily pecan from the door sill. Then Man (in the guise of a boy with a gun) reinforced by the Elements (in the form of a pine borer infestation) resulted in the extinction of our pets.

In the succeeding years, we would occasionally see one hopping across the road to our neighbor's huge pecan tree, but we sensed that our dog and cat did much to discourage settlers.

Leonord Lee Rue III photo

By JOYCE FITCHETT RUSSELL
*Kilmarnock*

Then this spring we decided to continue filling our bird feeders throughout the summer so that we may see the young birds. Daily we put out sunflower seeds, peanut butter and water. Imagine our delight when the bait drew first one, and eventually three squirrels at once!

When the flickers vacated their box on the oak tree in the front yard, we wondered why the starlings objected so vociferously to the squirrel's presence in the area. Then we realized she had moved in. We never knew how she was able to discourage the blackbirds, except for seeing her race up the tree and into the box a few times, but the ugly hordes soon left her alone.

As the days grew hot and we sat on the porch, we would laugh to see her burst out, climb onto the roof and collapse, with her tail propped up on the tree and her feet hanging over the edge of the sturdy birdhouse. Should we attempt to bore vents in it? It was obvious the mother would have appreciated air-conditioning. Surely a box built to flicker specifications was not ideal.

One waning afternoon we saw a face at the opening: Was it a baby? The owner grew bolder as the days passed and would finally lean out to watch as we passed beneath on our way to the evening paper box.

In retrospect, we figure about six weeks elapsed from the time the mother moved in until we watched the climax of the affair. Mid-morning of a Saturday, the mother climbed out and up to the nearest limb, where she perched, waiting. Such inertia was rare for she was usually busy and moving. First one face appeared, then another. She had *two* babies! Gradually one leaned farther out, twisting sidewise and upside down until suddenly he was clinging precariously to the front of the house. Slowly he inched around to the side of the box and then onto the tree trunk. His mother rushed down to him and, chattering, led him down the tree.

Some 50 feet away stands a wild cherry tree that had incubated families of bluejays and chickadees in the early spring. Near the top was a big leafy nest we had been hoping may hold a second squirrel family. As we watched the mother and baby alternately hopping and slithering past the porch, we began to wonder if she had built a second home. Surely enough, she guided him to the tree and up to the very top. Then, by way of treetops, she returned alone to the birdhouse. This time she shoved the waiting baby back in as she entered and immediately popped back out with him in her mouth! Down the tree she came, looking like a mother cat, except that she held her young by the chest or stomach and he in turn arched his tail over her head. Astonished, we watched her transport three remaining babies in this same manner.

A quick check in a reference book assured us that five babies are the usual litter and that the father shares none of the parental responsibilities. We decided to put out some peanuts as a reward for her.

For the next several weeks the young cavorted among the upper leafy branches, learning to climb, jump and cling. Now she brings two at a time to the feeder where they enjoy playing more than eating. She sits in the two-storied tree feeder munching feverishly but constantly watching them race from tree base to bush, sometimes leaping straight up if a leaf blows near. Now one practices digging furrows in the mulch around a shrub; there another scurries up a tree to hang upside down and stealthily watch a bird taking a bath.

We are glad to have them back.

# BLAZE A NATURE TRAIL

By CARSTEN AHRENS
*Pittsburgh, Pennsylvania*

SCHOOL was out, but the twins, Bob and Betty, were restive. Of course they were glad classes were over, and yet . . . The second week of freedom had climaxed with the Fourth of July; then there was a letdown. Now they sat on the glider absentmindedly leafing through some magazines.

Bert White from up the street biked along and came to a lazy stop near the glider.

"Hi ya, Betty, Bob?"

"'Lo, Bert."

"What cha doin'?"

"Nothin'. Sit down."

"Kinda dead around here. Look, Mr. Nold's out planting something."

"Let's see what he's after."

The trio left the porch, leaped the low hedge, and ran through the vacant lots toward the old biology teacher.

"Hi, Mr. Nold."

"Good morning, boys and Betty."

"Isn't this late to be planting stuff?"

"Yes," said the biologist as he made what seemed to be a very large hole for the little tree he was about to plant, "but if the roots aren't disturbed too much . . . if plenty of soil comes with the plant . . . if it gets sufficient water and there's good drainage . . . it'll live. Most transplanted things that die (like people in accidents) die of shock."

"What kind of a plant is it?" asked Bob.

Mr. Nold looked at him intently. "You've been up and down this old hill a thousand times, and you've never met this plant?

"I dug it out right down there a couple hundred of feet back. I want a tree on the corner of my lot. There are many of them around and, Bob, you don't know it . . . you shouldn't be so high-hat."

Bert had been examining its one, two, and three lobed leaves.

"It's sassafras, isn't it?" he asked. "When Grandpa visited us last fall he pointed it out to me. It was all red and gold then. Said they used the bark or something for medicine or something."

Mr. Nold finished the planting.

"What are all of you doing this summer?" he suddenly asked.

"Bert and I have delivery jobs at Marcy's each afternoon," said Bob.

"I read an hour after lunch to old Mrs. Rice, and in the evenings I baby-sit with the Jones' kiddies," supplied Betty.

"Then all of you have the mornings free?" said the biologist.

"Yes, sir."

"Then why don't you make it your business to make the acquaintance of one or two plants each day on this hillside. By the end of the summer you will have a hundred real friends . . . friends who will be constant as long as you live . . . friends whom you will meet over and over again, wherever you go. Why don't you blaze a nature trail?"

"What's that?" the three said together.

Together they walked through the vacant lots to the edge of the long hill that dropped, now abruptly, now gradually, through a tangle of underbrush and trees down to Trotsman Road a fourth of a mile below. A cardinal passed like a flame through a thicket.

"We might start the trail at that big tulip tree there," began Mr. Nold; "it's an excellent example of that species."

"I didn't know tulips grew on trees," said Betty.

"The kind you're thinking of doesn't. But last spring this tree was loaded with light green and yellow tulip-like flowers."

"Tulip tree," said Bob softly; "tulip tree . . . Now where did I read about one? Mr. Nold, do you know its Latin name?"

"Why, yes," laughed Mr. Nold. "Why? It's Liriodendron *tulipifera*."

"That's it," exclaimed Robert. "We read it this spring. It's in the *Gold Bug* by Poe. The skull was spiked to a tulip tree, and Jupiter dropped the bug through."

"You're right," agreed Mr. Nold. "I'm fond of Poe, too, although he wasn't as strong in natural history as he pretended. Well, this will give us a start."

Mr. Nold took a pencil and an old envelope from his pocket.

"We'll make a tag," he said, " and put down that information. Little . . . interesting facts . . . like that . . . are helpful . . . to the memory. Now . . . how's that?" He showed them the tag:

TULIP TREE
Often called Yellow Poplar
Liriodendron *tulipifera*
According to Poe in THE GOLD BUG, Cap't Kidd buried his treasure beneath a skull that was nailed to a tulip tree.

This he pinned to the tree.

"But," objected Bert, "the first wind and rain storm that comes along would blow that slip galley-west."

"Sure," agreed Mr. Nold, "this tag is just a suggestion. What is best are small squares or rectangles of tin that have been painted white. Any information about the plant, then, can be neatly printed on the tag. Use India ink since it is waterproof. These metals can be tacked to the species named, or wire may be used if both sides of the tin contain information. If you have some spending money, you can get blank tags ready for your printing from biological supply houses."

"What would you do in case of a flower like a violet?"

"When there are flowers or small plants, force a stake or a heavy wire into the earth near the plant, and then you can

(Continued on Page 21)

Mr. Ahrens is a retired National Park Service Ranger.

VIRGINIA WILDLIFE ☆ ☆ ☆ ☆

# CONSERVATIONGRAM

Commission Activities and Late Wildlife News . . . At A Glance

NORTHERN PIKE SPAWN IN ELM HILL POND. One hundred 20-29 inch two-year-old northern pike were placed in a 32-acre shallow lake on the Game Commission's property bordering Gaston Lake. These fish have spawned, and judging by the growth rate of young northerns of the same age at the Commission's King and Queen Fish Cultural Station, they will be 3 to 4 inches long by late June.

The newly produced fry will be allowed to grow in the lake until they reach the three to four inch size desirable for release. The pond will then be drained and the fingerlings recovered at the outlet for stocking in Gaston Lake and other suitable waters. If spawning and survival are good, this will be the greatest number of exotic fish produced for stocking since the program started in 1963. Several thousand northern fry from other brood fish are being reared at the King and Queen Station.

14 GAME WARDEN TRAINEES ASSIGNED. Fourteen graduates of the Game Commission's latest Training School have been given temporary assignments in various parts of Virginia. These game warden trainees will work on a probationary basis for one year, during which time they will receive on-the-job guidance and counsel from regular wardens and supervisory personnel.

Initial assignments of the new wardens included Norman O. Cole, formerly of Big Rock, who was assigned to Washington County and Joseph Cooke of Troy, who will begin work in Nelson County. A former Harrisonburg resident, Jerry W. Dove, was assigned to Rockbridge County and Kenneth W. Dudley, of Martinsville, will go to Mecklenburg County. Lewis F. Dunn, of Bristol, will begin his field training in Campbell County and Hampton resident Walter W. Eggleston will work in York County.

James C. Holt, formerly from Lynchburg, will move to Powhatan County to begin work while Irvin L. Kenyon, Jr., from Fairfax was assigned to Rappahannock County. Former Chesapeake resident Donald L. Montgomery will work in the Virginia Beach area and James L. Ross of Abingdon was initially assigned to Roanoke County. David H. Thompson, Jr., of Great Falls, will work in Prince William County, while James S. Winn of Bon Air will start field training in Goochland County. Former Radford resident Donald P. Wirt will work in the Fredericksburg area, and William E. Worthington, of Newport News, was assigned to Accomack County on the Eastern Shore.

BEAVER HARVEST UP IN STATE. Under the recently instituted beaver pelt tagging system, the Game Commission issued 4,184 tags during the 1966-67 trapping season, according to Assistant Law Enforcement Chief R. S. Purks. This represents a substantial increase over the 3,416 beaver pelts tagged during the previous year. The reported number of beaver trappers dropped from 326 in 1965-66 to 239 during the season just ended.

Over three-fourths of the beavers came from Northern Virginia, primarily from the section between Richmond and Fredericksburg and from some of the Northern Neck counties. Caroline County led the state with a harvest of 785 beavers, more than double the previous season's total. Spotsylvania County produced 461, and in King and Queen County 384 were taken. King William, Essex, and Richmond Counties were also good producers of beaver. Bath County was the only western county that recorded any appreciable number of pelts, and its total of 63 was down somewhat from the 107 taken there during the previous season.

Under the regulation adopted in 1965, all beaver pelts must be tagged with an official seal of the Game Commission before they can be sold. Game Wardens and other Commission personnel are available to tag pelts.

A BOAT-AND-TRAILER combination can open a new world of high adventure to any owner of a small pleasure craft. It can make it possible to go places and cruise areas that would otherwise be inaccessible to a boat owner who lives great distances from a lake, river or ocean.

Putting a trailer under the family rig also solves the off-season problems of permanent mooring or dock space, storage costs, and bottom fouling. But more important, your boat can be used as a load-carrier en route to remote camping grounds or extended hauls to distant vacation spots.

You don't have to actually own a trailer to take advantage of the convenient ease in transporting the family rig. Most marine dealers rent them out. But whether you own, rent or borrow a trailer, *unless* it matches the craft's contour, it can spring the hull so far out of shape as to alter, or even destroy, its handling characteristics.

The wide selection of boat-trailer models available to prospective buyers might seem bewildering, but the vast number exist only to match the many different sizes of pleasure craft. Even if you own a boat with an odd-shaped hull design, there are trailers which provide for custom fitting. Snowco, for instance, offers models which have movable cradles to fit a wide range of hull sizes.

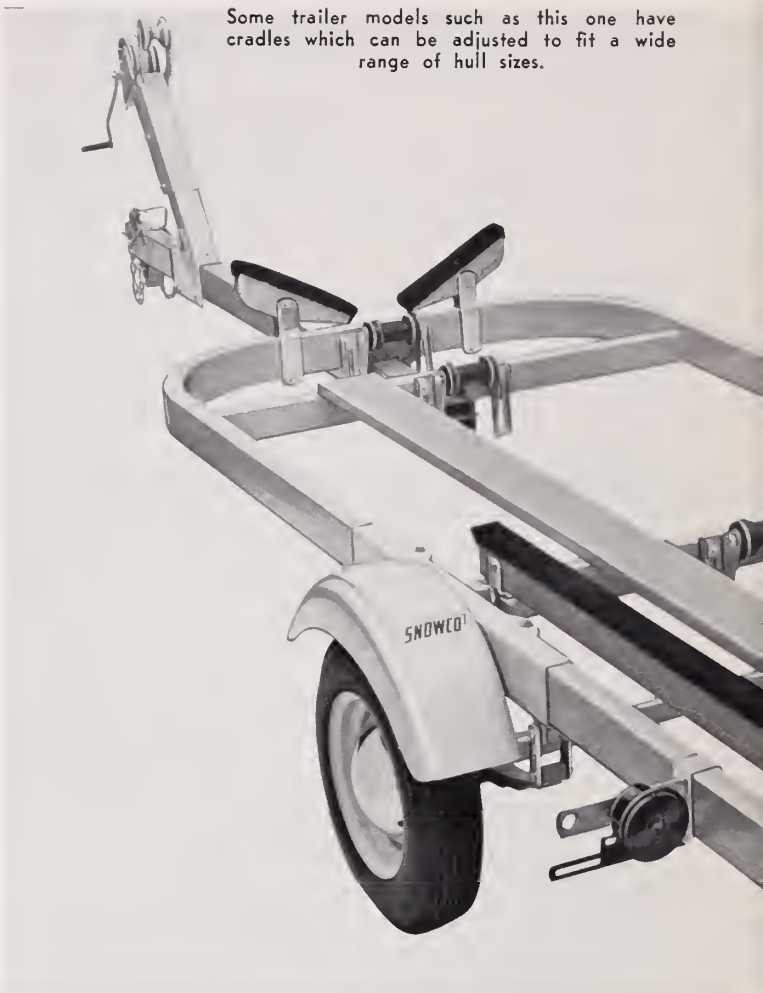
It costs more to purchase a trailer specifically designed to match some hull types. Customized trailers have a lower center of gravity, a fact owners appreciate on expressways and at shallow launching sites. But if there's a chance you'll soon switch boats, the best bet is to select the cradle-adapted type.

Whatever hull design your craft has, the more places it's supported on the trailer, the less risk of structural damage. Since your craft will spend most of its time aboard the trailer, whether it's being transported or not, the cradles or rollers should be positioned at the strong points of the hull—never on the wide open flat spaces of the bottom skin. Generally speaking, supports that run the length of the hull are better than those running across the width; they span several strong points to create an absolute minimum of strain.

All heavy sterndrives and big outboards must be supported under the transom. If the stern overhangs the rear supports by even a few inches, the engine weight will be borne by the hull. Damage from this source can be avoided *if* the trailer is as long as the hull. An inboard must be supported under the motor where the weight is solidly braced to absorb road vibrations. Highway knocks under heavily laden areas not properly supported results in loosened seams and fastenings in wood hulls, dents in metal, and cracks in fiberglass.

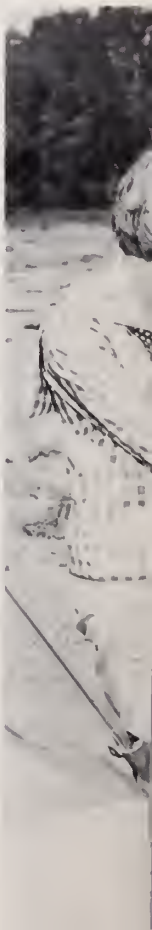
When selecting a boat-trailer, choose one according to the maximum load it will carry. You can find this information on the serial plate attached to the frame. This maximum load capacity, which is required by many states before licensing, includes the total weight of trailer, boat, motor, and whatever gear might be carried inside the craft while on the road. When computing the weight of your craft and motor, also figure the weight of your anchor, full fuel tank, battery, and any gear that might be carried such as fishing tackle, water skiis, cooking utensils, camping equipment, luggage, and food supplies.

Your craft, it it's made of wood, can absorb better than 15 percent of its weight after only a few weeks afloat. Allow for this weight, and also any water that might be carried in the bilge.




Some trailer models such as this one have cradles which can be adjusted to fit a wide range of hull sizes.

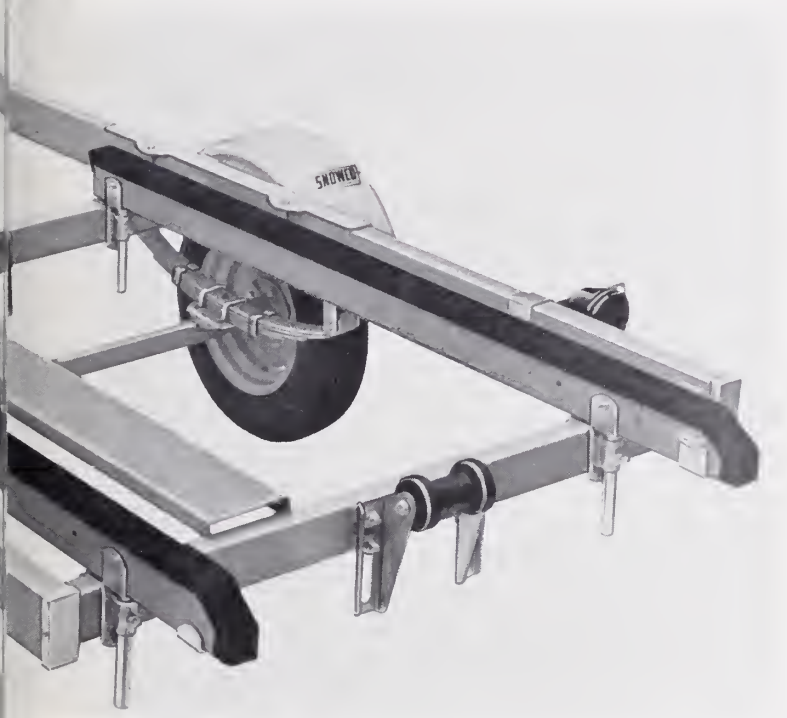
The actual launching operation has been made simple by trailer manufacturers. The first step is to unfasten the tie-downs which keep the hull flush with bottom supports. Next, tilt the outboard motor up, and unlock the bow winch.



# Your trailer--Does it match your boat?

**BOAT OWNERS WHO KNOW HOW TO SELECT AND ADJUST A TRAILER STAND TO SAVE MONEY ON REPAIRS, AND HAVE A SAFER, BETTER-HANDLING CRAFT**

By WAYNE HEYMAN
*Marquette, Michigan*




If the trailer's hubs, bearings, axle, springs and shackles can stand the strain, an owner can increase the maximum load carrying capacity by increasing the capacity of the tires. When computing a tire's maximum capacity, use the OBC table listed on page 16 which gives peak safety loads for various inflations. Here's how it works: each tire design is rated to handle certain load limit when inflated with the correct pound pressure or free air for speeds up to 50 miles per hour.

Let's say, for instance, your trailer is equipped with two 4.80/4.00 x 8 4-ply tires. The table shows the maximum load *each* tire of this design can safely handle is only 600 pounds, at 65 pounds air pressure for speeds up to 50 miles per hour. This totals a maximum safe handling capacity of only 1200 pounds. Any amount beyond this weight will overload the tires and result in a blowout.

Now if your *unloaded* trailer weighs 300 pounds, the boat and motor 1000 pounds, and the gear you intend to carry 200, you'll need a set of tires which can safely handle 750 pounds each. A good selection would be the 5.70/5.00 x 8 6-ply tires which can handle the weight at 55 pounds air pressure. If you want a softer ride (35 pounds air pressure), with tires operating well below their maximum capacity (1270 pounds at 50 mph), the better choice would be the 6.90/6.00 x 9 8-ply.

Some lightly constructed trailers can't handle an increase

The trailer is backed down until the wheels are a few inches into the water. The car's emergency brake is set, and it is a good idea to be safe and chock a wheel. A few turns on the winch should lower the boat gently into the water. As the weight of the boat moves aft, the bow line is held or secured to the car's bumper so the boat will not drift off into open water.

Millions of boat owners find it convenient to haul the family rig to distant camping grounds. This combines the fun of camping out with such sports as water skiing and fishing.

in weight beyond that specified by the manufacturer. Since most boat-trailer owners will eventually use their rigs as a load-carrier, it is best to inspect the frame to be sure it's strong enough for heavy loads. For weights beyond 2000 pounds, the frame should be trussed, fore and aft, to resist bending, and there should also be an ample number of crossmembers for maximum structural strength. Check the bolts or rivets for any looseness. If the frame is welded, then the welds should be smooth, free of pockets, with each seam completely covered.

After the craft is aboard the trailer and fully loaded, inspect the springs. These should depress about halfway down to absorb road shock. If they don't flex, knocks and bumps go right through to the hull; if they lay flat, there's no "spring" action, and hull damage—bottoming-out—will result. Flattened springs also increase tire and bearing wear.

Last but not least, after you've positioned the supports, loaded the boat, and checked the springs, make sure bow and transom tie-downs are securely fastened. The hull must rest flush against the supports with little or no give.

Most boat owners eventually use their trailers as load-carriers, saving space for the family to stretch out comfortably in the car on long hauls. Make allowances for this extra equipment weight when selecting your trailer.

**Tire Load Capacities**

(Courtesy Outboard Boating Club of America)

BOAT TRAILER TIRES AT 50 MPH MAX SPEED TIRE LOAD CAPACITIES VS INFLATION

Tire Load Capacity at Various Inflations

| Tire Size | Ply Rating | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4.80/4.00 x 8 | 4 | 380 | 420 | 450 | 485 | 515 | 545 | 575 | *600* | | | | | | | |
| 4.80/4.00 x 8 | 6 | 380 | 420 | 450 | 485 | 515 | 545 | 575 | 600 | 625 | 650 | 675 | 700 | *725* | | |
| *18/5.50 x 8 | 4 | 450 | 560 | 640 | 680 | 745 | | | | | | | | | | |
| *18/5.50 x 8 | 6 | 450 | 560 | 640 | 680 | 745 | 795 | 845 | 885 | 910 | 940 | | | | | |
| *18/5.50 x 8 | 8 | 450 | 560 | 640 | 680 | 745 | 795 | 845 | 885 | 910 | 940 | 995 | 1050 | | | |
| 5.70/5.00 x 8 | 4 | | 575 | 625 | 665 | *710* | | | | | | | | | | |
| 5.70/5.00 x 8 | 6 | | 575 | 625 | 665 | 710 | 750 | 790 | 830 | 865 | *900* | | | | | |
| 5.70/5.00 x 8 | 8 | | 575 | 625 | 665 | 710 | 750 | 790 | 830 | 865 | 900 | 930 | 965 | 1000 | *1030* | |
| 6.90/6.00 x 9 | 4 | | 785 | *850* | | | | | | | | | | | | |
| 6.90/6.00 x 9 | 6 | | 785 | 850 | 915 | 970 | 1030 | *1080* | | | | | | | | |
| 6.90/6.00 x 9 | 8 | | 785 | 850 | 915 | 970 | 1030 | 1080 | 1125 | 1175 | 1225 | *1270* | | | | |
| 6.90/6.00 x 9 | 10 | | 785 | 850 | 915 | 970 | 1030 | 1080 | 1125 | 1175 | 1225 | 1270 | 1320 | 1365 | 1410 | *1450* |
| 4.80/4.00 x 12 | 4 | 545 | 550 | 595 | 635 | 680 | 715 | 755 | *790* | | | | | | | |
| 5.30/4.50 x 12 | 4 | 640 | 700 | 760 | 810 | 865 | 915 | | | | | | | | | |
| 6.00 x 12 | 4 | 855 | 935 | *1010* | | | | | | | | | | | | |
| 6.00 x 12 | 6 | 855 | 935 | 1010 | 1090 | 1160 | 1230 | *1290* | | | | | | | | |

*Italics* indicates maximum recommended loads at 50 mph as determined by Tire & Rim Association.
*These sizes do not appear in the Tire & Rim Association's Yearbook. Load is set by individual manufacturer.

# SEASONS IN DISMAL SWAMP

## *Spring*

By ULRICH TROUBETZKOY
*Richmond*

Va. State Library photos by Wirt A. Christian, Jr.

Aerial view of a portion of Lake Drummond and the Washington Ditch. Inset: Looking northwestward along Jericho Ditch from a point where it joins Washington Ditch.

WHEN spring arrived at 2:37 on the morning of Tuesday, March 21, the rain came with it. Had we waited for the official opening, my Rambler and I would certainly have been mired down along one of the canals.

It was on the day before spring that I went into the swamp to see what was happening as the seasons changed. There were ducks on some of the ditches, or canals. A great blue heron flapped up from the Cross Canal. The ash-colored woods along the Middle Ditch were aquiver with darting, singing birds, but much of the swamp was silent. There was at least one convention of robins and, every now and then, a cardinal flared against the seemingly unawakened trees.

Driving along the high, narrow, dirt roads beside Jericho, Middle or Washington Ditch, the landscape was almost as gray as the sky, except for the punctuation of such evergreens as the "juniper" (actually the white cedar, *chamaecyparis thyoides*), pond pines, myrtle and the looping vines of *smilax laurifolia*.

However, when I got out of the car to walk along the Cross Canal, I discovered that the gray was only a mask of spring. When I came close to the shrubs and trees I found that some of the red and green buds were ready to burst and others were beginning to unfurl. In a week the stark thickets would be soft in a haze of color.

What John Lynn, the guardian of the gate, calls "them loggin' fellows" were working further down the Jericho, so I turned around and headed toward the crossing of the swamp at Middle Ditch. On the way I stopped to cross log bridges over the Jericho Ditch and peek into the woods. Intensely blue violets were in bloom and I saw a few dandelions, but no other flowers.

There were amusing variations in the bridges. Some seemed to be simply the accident of a large tree having fallen across the banks in a convenient way. To others a flimsy handrail had been added. One relatively luxurious bridge had two large logs over which slats had been nailed for easy crossing. It was more fun balancing one's way across the single logs.

It seemed strange to be able to look through the woods that would soon be impenetrable to the eye. However, I didn't venture very far over the twisted roots, wet spring earth and deep slippery moss. I remembered what the Nansamond Indian guide, Earl Bass, had said to me a few years ago:

"That's when you get lost. When it's a little cloudy." After awhile, he went on, you will climb a tree to get your bearings, but everything will look the same. It was excellent advice from someone who had grown up with the swamp almost at his back door, at Bowers Hill, Yadkin.

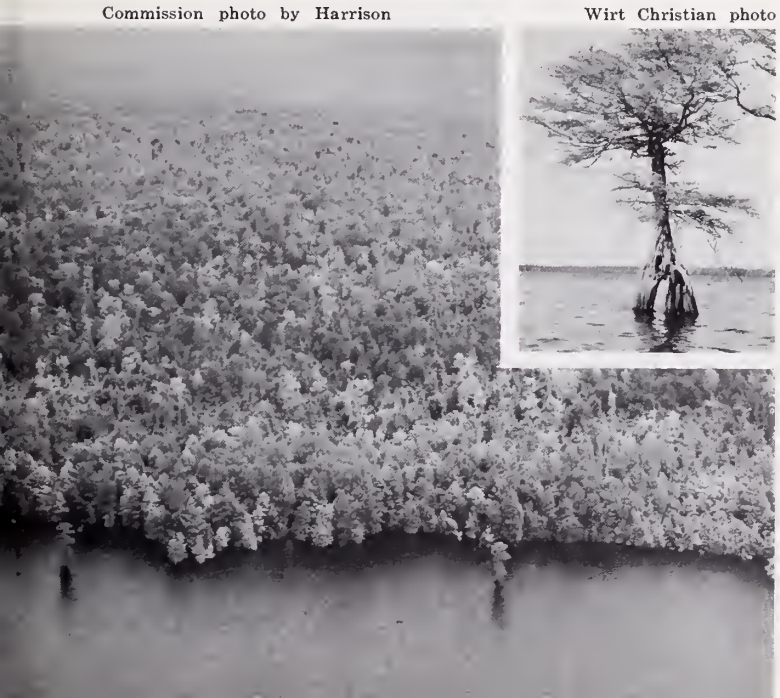
"Daddy (Jesse Bass, 1875-1960) wouldn't believe all those roads." Earl said. There used to be big trees and no underbrush when he hunted the swamp. They would "skin a path and walk on down into the big swamp." People went a mile or so at the most, "not way in as they do now."

Over on the Portsmouth Ditch I had had a canoe ride through the swamp spring with Wallace Williams and R. C. Biddle, so I had some notion of the greater enchantment the swamp must have had before there were even these narrow roads, only waterways and towpaths. Then visitors floated into the lake by water, under the overhanging boughs of flowering sweet bay and blueberry bells—and perhaps a few overhanging snakes.

Rambler and I managed to skip by the deepest ruts on the Middle Ditch and finally came to Lynn where I turned left and headed for Washington Ditch, which was originally dug during the 1760s and may have been the first "monument" to George. In this roundabout, stopping-and-looking kind of way I finally came to the brimming lake with its fringe of cypresses.

Cypress trees stand in Lake Drummond's water.

Commission photo by Harrison — Wirt Christian photo



The water was higher than I had ever seen it in Lake Drummond and the sun, which had reluctantly and tardily appeared, was lighting the puffy cumulus clouds that were reflected across the wide still face of water.

A lone fisherman was perched, still as a piece of sculpture, at the end of the jutting Pete Perry Hunt Club pier. He was motionless, that is, until his float twitched on the water. Then he would lift his bamboo pole, draw in his line, drop a small wriggling fish into a can of water, bait his hook with a pink worm and drop it back into the glossy lake. He wasn't very excited over his large catch of "raccoon perch" and "roach." "Next month," he told me, they will be getting "speckles" (crappie).

As the swamp hunter, Joe Barnes, had already told me, before the big fire of 1923, there had been plenty of jackfish, bass and pike. Afterwards the lye and ashes drained into the lake, so the pickerel, bream and bass died. However, bream have been restocked privately and bass have been put in by the Commission of Game and Inland Fisheries, according to Supervising Warden W. Shelton Rountree, of Suffolk. Bass, crappie ("speckles") and bream are the principal sport fishes in the shallow lake today. There are also many rough fish such as "grinnel" (blackfish) and catfish.

The lake, one of the highest parts of the swamp, is about 22 feet above sea level. It is surrounded by low swampy woods in which there are wonderful formations of cypress "knees" and the arched roots of black gum trees, both remarkable adaptations to swamp living, for aeration.

There are two types of swamp in the Great Dismal. One is the "dark" swamp of the cypress and black gum. The other is the "light" swamp of the juniper (white cedar). A true peat, 10 feet deep in some of the interior, is found in tracts that are or were covered with stands of juniper. Decomposition has progressed very little and the result is a spongy stringy mass.

Where the juniper swamp has been logged or burned, there are "lights," treeless tracts with reeds, ferns, fetlock bushes, honeysuckle, wild grape and Virginia creeper. Some of the "lights" are growing back into forest, but with maples, myrtle and pond pines rather than juniper.

How did the Dismal Swamp happen? Geologists say it was once underneath the sea which broke against the Nansemond Escarpment, a sea beach to the west. As George Washington was perhaps the first to observe, the swamp is "neither plain nor hollow, but a hillside." A local theory is that the lake depression resulted from a long-burning fire in the deep peat deposits, but geologists class it with the type of peat-enclosed lakes common in morasses of glaciated areas.

To the famous juniper water of Lake Drummond have been attributed a variety of virtues, from that of being a healthful tonic to qualities downright magical. In the days of sailing ships, the water was barreled and taken on board for long voyages, apparently because its acid character kept it from getting flat and stagnant. The late J. H. Reid, a surveyor in the swamp for 50 years, told me a few years ago that on surveying trips the men would punch out the joints in a reed and suck the juniper water.

The Great Dismal Swamp now covers about 750 square miles in Virginia and North Carolina. Union-Camp owns about half, approximately 50,000 acres in Virginia and plans to keep its swamp swampy for the production of timber. The other large landholder in the Virginia part of the swamp is Washington Forests, Incorporated. It has a forestry operation and is developing land for farming and, possibly, future industrial and residential uses.

Five streams originate in the Great Dismal Swamp. The deficiency of slope plus the clogging of vegetation, which slows the movement of the water, are believed to be the basic factors in formation of the immense swampland. However, it was once a great deal larger than it is now and was continuing to expand outward when George Washington and five associates formed the "Adventurers for Draining the Dismal Swamp" in 1763.

Although William Byrd II, one of the commissioners in 1728 to run a boundary line between the colonies of Virginia and North Carolina, has been given credit for the melancholy name of the swamp, there are earlier records of it. The Bass family intermarried in very early times with the Nansemond Indians and held their lands under the treaties of 1646 and 1677. A certificate of May 17, 1726/7, signed by Solomon Wilson, clerk of the court, refers to "An Inquest pertaining to possession and use of Cleared and Swamp lands in and adjoining ye Great Dismal by William Bass, Senr. and His kinsmen. . ." The certificate goes on to say that according to

Photo by the author

Single and double log foot bridges cross Jericho Ditch. The last of the black bears of eastern Virginia are found in Dismal Swamp.

Commission photo by Tuttle

Troubetzkoy photo

Left: A late afternoon fisherman fishing for "speckles" (crappie) in Lake Drummond. Right: John Lynn, an old-time logger who now guards the entrance to Dismal Swamp by way of Jericho Ditch Lane.

Photos by the author

"testimony of White persons and sundry records of great age known to be authentic," the members of the Bass family are "freeborn subjects of his Maiestie. living in Peace with his Maiestie's Government, entitled to possess and beare Arms, as permitted by Treaties" and that the family is in lawful possession of "ye cleared Lands and Swamps held and used by his and Their forebears since and before English governance in Virginia."

To see the wildlife of the Dismal Swamp, it is best to look early in the morning or in the evening. At night you may hear the almost human scream of a bobcat or the rhetorical who-who-ing of an owl. However, late one May morning when I went into the swamp, accompanied by George Gehrken, who is in charge of wildlife conservation for Union-Camp, we saw several white-tailed deer—one doe bounding off with honeysuckle in her mouth—both dark and light quail, a rabbit, a squirrel, great blue herons, a pileated woodpecker, spotted turtles, a red-shouldered hawk, a salamander and a swarm of tiger swallowtail butterflies. Obviously there is much life in the swamp, although not the diversity of forms found in surrounding areas.

At least one famous spring visitor was not so fortunate. William Byrd II, who was one of the first to write about the swamp, saw no wildlife and came to the grim conclusion that "Not even a turkey buzzard will venture to fly over it, no more than the Italian vultures will over the filthy Lake Avernus, or the birds of the Holy Land, over the Salt sea. . ." Yet, to naturalist, Paul Bartsch, in June 1899, the swamp was "filled with musical sound" and he listed 52 different kinds of birds observed on two trips.

Of course Bartsch is talking of the more lively time when spring is turning into summer, whereas Byrd came to the swamp in the grayer, quieter month of March.

On their way to the rendezvous with the North Carolina commissioners, the Virginians one evening "reacht Mr. Godwin's, on the South Branch of the Nansamond River where they were treated with abundance of Primitive Hospitality." In his *History of the Dividing Line*, Byrd goes on to say that this obliging gentleman "was so kind as to shorten their Journey by setting them over the river. They coasted the North East Side of the Dismal for several miles together, and found all the Grounds bordering upon it very full of Sloughs. The trees that grew near it look very Reverend with the long Moss that hung dangling from their Branches. . ." He noted too "abundance of that kind of Myrtle which bears the Candle-Berries" and "here and there Gall-bush, which is a beautiful Evergreen. . ."

Byrd's "frightful place" looked like a "glorious paradise" to George Washington when he visited it May 25-28, 1763, for he was looking at it with the eyes of a real estate and timber speculator. Unlike Byrd, too, he saw an abundance of wild fowl and game.

Both Byrd and Washington envisioned a canal that would connect the waters of Albemarle Sound with Chesapeake Bay. With Governor Patrick Henry as one of the promoters, commissioners were appointed in 1784 to study and make recommendations on the possibilities of such a canal. On December 1, 1787, the General Assembly passed an Act for cutting a navigable canal, contingent on the passage of a similar act by the North Carolina legislators. After many delays and frustrations, on April 30, 1812, Governor Barbour visited the Dismal Swamp Canal—which Alexander Crosby Brown calls "the oldest surviving artificial waterway in the United States"—to "witness the Junction of the waters of the Sound and of the Chesapeake and passed from one to the other in a boat containing 100,000 shingles, amidst the shouts and applause of the spectators."

One of the most eloquent spring visitors to the Dismal Swamp was the naturalist, Edwin Way Teale, who wrote in

Lake Drummond's acid water is not rated as highly productive, but it does yield fair catches of bass, crappie and bream and many anglers enjoy fishing in this unique wilderness setting.

Commission photo by Harrison

**Spring** (Continued)

*North with the Spring* (1951) of turtles sliding off logs into the water, a muskrat dripping, the shimmering trail of whirligig beetles, a monarch butterfly, catbirds mewing from the thickets and the gold and blue glimpses of prothonotary warblers—sights and sounds to be expected of the swamp in May.

Its beauty is not unalloyed. At some times and in some parts of the swamp the flies and the mosquitoes can be quite ferocious. Oddly enough, my own worst bout with mosquitoes came not in one of the wetter areas. It was in a large stand of tall timber—mostly willow oak, water oak, chestnut oak and beech—where the draw-down pipes showed the water about one foot below. There was a cover of white-flowering partridge berries, but comparatively little shrubby undergrowth. The trunks of most of the trees went to a considerable height before branching.

The ponds were to blame, George Gehrken explained. Squishing ankle-deep in a much swampier place, among buck bush and greenbrier, we had encountered none because the water was moving, although slowly. Byrd in March 1728 had encountered mosquitoes which he called a "plague . . . as the flies were formerly of Egypt, and some rabins think those flies were no other than mosquitoes."

Snake stories about the swamp are usually at one extreme or the other. Some go frequently into the swamp and claim to see comparatively few poisonous snakes. One forester was so persuasive that he overcame his wife's fear of going into the Great Dismal, only to meet the largest rattlesnake he had ever encountered before he had taken her a mile into the swamp.

Raymond Ditmars, reporting on the snakes in the swamp, wrote that it lies too far north to include strictly southern reptiles. Its prevailing serpents are harmless water snakes, but there are four poisonous types: banded and diamond-backed rattlesnakes, copperheads and water moccasins which are, here, at about the northermost limit of their range.

According to Joe Barnes, "Old man Crockett used to cut lumber and used to tell about big rattlesnakes," but Barnes had never even seen one until about five years ago. Then he says he saw nine in a week. Before taking any chances with a hollow log, Barnes says, "We always judge around first to rout out any copperheads."

The swamp must look quite different today from the swamp seen by Byrd, Latrobe, Rochambeau and Washington. Ditches cut before the American Revolution lowered the water level and began to affect the composition of the forest. Union-Camp technicians today are experimenting with the effects of raising and lowering the water levels and impounding water in certain places. The 19 hunt clubs, which use Union-Camp property, maintain canal-bank roads and bridges and cooperate with experimental plantings.

However, the swamp is changing less in the Union-Camp area than in some others where a revolution is taking place to the racing sound of a chain saw, as the giant yellow bulldozers are bucking and snorting their way into the woods and the dragline booms are slowly but irreversibly moving across the land.

Surrounded by the songs, silences and colors of the waking swamp, one cannot but wonder how long its wilderness, already being nudged by spreading cities, can keep its identity—how many more years its flowering sweet-scented springs will be reflected in the slowly moving darkness of its waters.

# TRASH ON OUR STREAMS

By JOHN GAVITT
*V.P.I., Blacksburg*

APRIL always has a special meaning for me. The end of a long, dreary winter, and the rebirth of many of nature's greatest miracles make it a favorite month among many Virginia residents. Every year at the beginning of April I go trout fishing, and every year I seem to enjoy it less. Not because there are fewer trout or less places to fish, but for the plain reason that there are fewer sportsmen on our streams. Our Commission of Game and Inland Fisheries takes time and money to stock the few remaining streams in Virginia clear enough for trout, and, as usual, the multitudes on opening day take most of the fish. This doesn't bother me, as it has become a tradition to experience a crowded opening of the season. What deeply disturbs me is the Virginia fisherman's attitude towards his natural resources.

Some people seem to think it adds a bit to the scenery when a lunch bag or beer can is thrown into a clear stream. Perhaps they get a special thrill when, looking into the water, they see the letters, "the beer that made Milwaukee famous," staring back at them. I don't particularly enjoy this bit of inspiration, nor am I filled with ecstasy when I think of the rust and other foreign particles entering and polluting the water. Why must fishermen be so careless with their trash? Don't ask me. I don't have a solution to the problem.

Sadly enough, I don't think things are going to change within the next few years. Trash has gotten to be such a common thing around and in our streams that many people feel their little contribution won't hurt anything. Fines for littering will never catch enough violators to make any difference, and the problem seems to worsen every year. How can we possibly hope that the next generation will attempt to alleviate the situation when we have done so little toward preserving the natural beauty of our resources? To buy an area for preservation is one thing, but to retain it in its original state is another problem that is yet to be solved in our state. In any case, our population is going to double within the next few decades, and unless our trash problem is solved, our parks, forests and wildlife areas are destined to be a magnificent dumping ground for people who seem to care so little for them. To let our remaining resources spoil like this is a crime that we have let spread like a plague. If Virginia allows this "disease" to continue spreading until it has overcome us, the fisherman of the year 2,000 will have to convince himself that trash really isn't all that ugly, and, besides that, dead trout are so much easier to catch.

**Blaze a Nature Trail** (Continued from Page 12)

attach a label to this."

"Do you have any special order for arranging the data on the tag?" asked Bert.

"Well, that's up to the trail blazers; usually any order that you follow consistently will be satisfactory. I like this arrangement:

"First, the common name or names (if any);

"Second, the scientific name . . . that's the genus and species;

"Third, some fact or facts about the plant that will aid memory."

"Why did you underline only part of the scientific name?"

"The first word, the one that begins with a capital, is the genus to which the plant belongs; the second name always begins with a small letter and is underlined. That's the name that was given it by the scientist who first described it."

"Gee," murmured Bob, "it isn't necessary to use that big scientific name, is it?"

Mr. Nold smiled. "When I was younger," he said, "I spent my summers in nature guidance work in camps for young folks. Every time we planned a nature trail, the campers would unanimously agree that the scientific terms were absolutely unnecessary. I never argued . . . just suggested that room be left on the label for the scientific term should it be wished later.

"You see, a dozen plants may have the same common name, and sometimes one plant may have a dozen different common names in as many states. Even in adjoining counties a plant may be called by several different common names. Then, too, rare plants are apt to have no common name at all. There are three willows on this hillside, yet there are no common terms that will distinguish one from another. The hawthorns are in the same boat.

"But," continued Mr. Nold, "to get back to the summer camps, invariably by the time the trail was completed, the Latin names were on the tags, and the boys put them there. You see, I called this tree a tulip tree, and someone else calls it a yellow poplar, and it has other common names. But it has one, only one, scientific name, and that name is the same in America or France or China."

"Do you know, Mr. Nold, I believe getting acquainted with plants would be interesting. How about the path itself?" Betty inquired.

"Shucks, Betty, Mr. Nold wasn't including you in this nature trail idea. This is a game for us fellows."

Betty's face fell.

"Not so fast, Bob," advised the biologist seriously. "One of the best nature trails I ever saw was blazed by a girl scout troop up in Maine. They had 18 species of ferns alone growing along their trail. Their labels were just as neatly printed and their research was as carefully done."

"I've a suggestion about our trail," said Bert. "Couldn't we use the old path that everyone uses who hikes up from Trotsman Road?"

"You could," said Mr. Nold, "but I like a trail that hasn't any other use except that of a nature trail. It should lead nowhere except to the homes of the wild things themselves."

"I'll bet old Mr. Wiley would let us make a path down his tangle. He has 40 acres of wilderness on the hillside. There's an abandoned quarry there, too," said Bert.

"There's a nice old road, all grown in like, too, that we could follow," added Bob.

"What rules do you lay down for the trail?" asked Betty. "How long does it have to be?"

Mr. Nold chuckled. "You make your own rules. I should think that the path should be long enough to skirt every possible habitat the area contains. It should lead through a bog, climb a hill, ford a stream, cross a meadow, etc. In other words, it should visit the highest, the lowest, the wettest, the driest, the richest, and the poorest of places because different species of plants will be found growing on each. Naturally, no trail will include all the plants of the region."

"Did the girls in the Maine camp transplant some of those ferns?"

"They surely did. Once in northern Ohio, after our trail was finished, we discovered the only cucumber tree in the township was growing a hundred yards from our path. Well, the tree was too big to transplant, so we lengthened the trail in order to include this handsome member of the Magnolia family."

"Did you label every plant just once?" asked Bert.

"At least twice . . . as a means of getting acquainted. You'll be surprised some times how unlike young and old trees of the same species often look. Often they don't seem related."

"Should we make a chart of where the labels are hung?"

"That might become complicated. The labels are white and will be seen by anyone looking for them. Attach them where they can be most easily read; yet they should not dangle everywhere, giving a sloppy, price-tag effect. I like a nature trail so marked that a very careless person might travel its entire length and see no tags at all."

"Dad brought us some bluebonnets from Texas . . . could we transplant some of them to the trail?"

Mr. Nold smiled. "That reminds me of another trail. I was teaching in a little town in New York and my biology class blazed a nature trail. Well, the whole town became interested. A wealthy man paved the trail and insisted on Japanese bridges across the little stream. A woman's club hired a nurseryman to plant hundreds of roses along the path. To be sure it became a pretty park, but it wasn't a nature trail. It's up to you; but I'd keep the plants native."

"Won't it be difficult for us to identify all the plants?" asked Bob. "There are books?"

"Plenty of them, and excellent they are, too. You can find a dozen fine plant and flower guides in the library. Some are so beautifully illustrated that you can just compare the plant with the picture. Then I have a scientific botany that will help settle the fine points."

"Will you check our identifications to see that we haven't called an ash tree an elm tree?" asked Betty.

"I'll go over your identifications, check your trail, every week," promised Mr. Nold; "and unless I'm much mistaken others will become interested too. You may have plenty of critics."

"I want to get started," said Bert. "Let's ride over and ask Mr. Wiley about a right-of-way across his forty acres."

"Oh, he'll let us," said Betty confidently. "I know him; he's an old dear."

"Thanks a lot, Mr. Nold, for the suggestions," said Bob.

". . . and all the ideas," called Betty.

". . . and your promise to check out tags," echoed Bert, and the three trotted across the vacant lots towards the bicycles.

# A Flutter in the Garden

By RUTH HIGBIE
*Brightwood*

IT is summer and the garden is anxious. The bird nests have spilled their crowding burdens like bursting pods scattering seed. Wild chirps, peeps, and screams come from the woodpile, from the hemlock over the terrace, from the clump of redbud trees, and from the cedar bluebird nest. In answer to these cries feathered bits of color search from ground to treetop for suitable provender. Red cardinal, blue jay, gray catbird, indigo-colored blue grosbeak.

The sinuous approach of the cat across the road sets them all screeching, the blue jay loudest of all. His two babies who came out of the nest yesterday sit side by side in the pine tree by the bird bath. Where yesterday they had only pinfeathers today there is a white and blue vee-shaped tail. Fuzz still covers their heads, darker where the deep blue ruffs will form. The two stay close together, moving only in short flights. Wherever they are, their parents swoop toward them through leafy paths flashing azure and white as they glide. The father is bringing two cottony white insects which he crams far down throats opened at his approach to the accompaniment of piteous cries and wildly fluttering wings.

Commission photo by Kesteloo

The white insects he is bringing have been eating the tender shoots of euonymous and the flower buds of day lilies and hosta. For fear of poisoning the birds I have refused to spray the insects. Now comes my reward as I watch jays, catbirds, sparrows, and my rare Bewick's wrens feeding them to their infants.

How vulnerable the young birds are. More in danger than the fragile thin-shelled egg under the soft breast of the mother is the tiny catbird, who sits on a branch in the woodpile, squeaking for all the world to hear. He opens wide his yellow-edged bill, flutters his half-done wings. He has no tail at all. Only his bright-bordered bill is full size. And his appetite. He shows no fear at my approach; the cat could walk up and swallow him.

Working desperately to fill him, to make him grow before an enemy gets him, the mother is searching the ground in the iris bed; the father hops from bloom to bloom of the fragrant pink phlox. With each mouthful they push down his throat his chance of survival improves a little. When I come near they scold vigorously. They ignore the raisins I hold out, though the catbird who lives across the street will eat from my hand.

He paid me a compliment this morning. He chose to take raisins from my palm instead of some I had placed on my typewriter table. Whenever I'm working on the terrace I'm likely to find him suddenly sitting on the arm of the chair next to mine, or on the bricks at my feet. His friendliness began with our meals which we take on the terrace all summer long. This catbird came closer day by day, and flew more quickly to the table for scraps when we left it. A week ago he perched three feet from me, and his shiny black eye looked at me so inquiringly that I went into the house for raisins and held them out to him, my hand stretched on the table.

The bright eyes looked at my face, then at the raisins. He opened and closed his black bill several times. A long hesitation, then a flight to the table. His boldness deserted him, and with a quick flirt of wings, away he went to the andromeda bush. Then back toward the enticing raisins, close enough to snatch one. Holding it in his beak he flew away, but in a moment he returned for another. Now he watches for me and comes to his vantage point in the andromeda as soon as I appear on the terrace.

Above us a young cardinal hops from branch to branch of the hemlock crying distressfully. He wants raisins too, but dares not come close. Finally I toss one ten feet away. A streak descends from the tree, and he has it.

In the flower beds a half dozen speckled-breasted young robins are foraging. The starlings have given up policing the grounds. Five or seven of them used to work in formation across the lawn, probing for Japanese beetle grubs. The larvae would be hatched now, if any escaped, and the starlings have gone elsewhere. I've found no metallic bronze-green beetles on the roses, so I thank my squeaky friends and forgive them their noisiness and their way of crowding around the suet.

I am surprised at how popular the suet is in the summer. Downy and redbellied woodpeckers, I expect. But the tufted titmouse, cardinals, jays, mockingbird and catbird (the one with the baby on the woodpile; my raisin eater ignores it)—all are regular visitors. At the moment it is schoolroom for a young redbelly. The parent woodpecker has brought his brownheaded son to the feeder, and is telling him in loud sharp notes that here is a seldom failing source of food. Will a generation of woodpeckers grow up to hunt only for suet holders, forgetting how to drill the hard bark of trees and listen for the nibbling worm beneath? After a dozen pecks at the suet, the woodpeckers fly to a dead branch in the neighbor's locust. There, balancing on their stubby tails, they drum loudly and efficiently. They'll keep their ancient skills yet awhile.

The baby blue jays have moved near the birdhouse where the sparrows have their nest, and the parent sparrows scold

as they try to fly past. The house, intended for bluebirds, was put up years ago in a moment of hopefulness, but the bluebirds have refused it. Once a downy woodpecker thought of using it. For a week or two he drilled around the doorway, enlarging it to suit his fancy, but something about it did not please him, and after a while he abandoned it. The English sparrows took over.

It reminds me of the time bluebirds did nest in a house we had fastened a half foot below the crotch of a young locust tree outside our dining room window. After the bluebird had laid her eggs a pair of robins built their mud and grass nest in the crotch. Within inches of each other the two families peacefully tended their eggs. The bluebirds would exchange duty while the mother robin sat placidly above them, not even blinking. We waited eagerly for the eggs to hatch; but when they did, amity vanished. The big robins obviously believed that might makes right. Every time the tiny blue creatures approached with food the robins set up a great commotion and drove them away.

We watched in distress. We loved robins, but they were a dime a dozen compared to bluebirds. We could not bear the cheeping of the babies in the house when they sensed the nearness of their mother and father with food which never reached them.

Being human, and therefore endowed with the divine right to interfere with nature, we decided to move the robin's nest. A scant ten feet away there was a redbud tree with a crotch just as good. We fitted the nest snugly into it and retired behind our window to watch. With a looped beakful of fishing worms the mother robin flew to the old crotch. She stared at the empty spot, turning her head this way and that to look at it from different angles. She circled away and came back. The father joined her, two swishy white grubs in his bill. Both birds perched where their nest should have been and peered hopefully; then in bewilderment they flew away, only to return a minute later to look again for their babies, who were screaming unheeded ten feet away.

We felt like criminals. No justification could take away the sight of those pitiful parents. Still we didn't want the bluebird babies to starve. What to do? We picked the nest up again and put it at the foot of the locust. It might have fallen there? So the robins thought. They spiraled back and found it. Great reunion. Three yellow-bordered young beaks opened wide, six wings fluttered violently, the parents rammed their heads into the waiting throats, and the nest was quiet while everyone swallowed.

Off to get more worms flew the parents. Meanwhile the bluebirds had made an unmolested trip with small winged delicacies. Out we crept to move the nest two feet toward the redbud tree. The redbreasts found it without difficulty this time. Again we moved it, and once more, and then up into the redbud tree. By now the robins were used to a peripatetic nest and went to it almost immediately. All was serene from that moment; the two families grew up in harmony.

While I am remembering that other spring, dusk comes. The blue jays, the catbirds, the tufted titmouse make one last foraging flight and silently disappear to secret perches among the leaves.

Next morning when the first chirping begins in the trees I am up to see if all is well after the night. The sparrows are still in the nest. I can't find the baby catbird, but his piercing cries tell that he still has his enormous appetite. The baby blue jays are together in the crab apple. Overnight one has gained on his brother. His tail feathers are an inch longer, and he is altogether sleeker and more alert.

My catbird comes to meet me as I stroll the brick path toward the terrace. I hold out raisins (I've taken to carrying them in my pocket whenever I go out) toward a branch of the elm he is in, but far enough away that he must perch on my hand if he wants them. Till now he has always stood on the table while picking them up. He hops near, retreats, advances. His delicate black feet brush my hand, but he flutters quickly away. Safely back on the branch he looks at me, then at the raisins. He flies to my hand, lights on it. His tiny claws rest on my fingers, and I carefully breathe a deep breath of delight. He takes a raisin and flies hurriedly to the elm. With a quick gulp he swallows it, then back he flies and again there is the thin prick of his claws as he takes one then another in his black bill. I see the nostrils and two small hairs near the base of the bill. The smooth gray body is light and neat. At the edge of the wing he is holding slightly away from his side the feather is like translucent gray organdy. He eats two raisins, then flies to take one to his baby who is waiting in a big dogwood across the street.

The larger of the young jays darts past me closely followed by his brother. Usually the parents bring food for both at each trip, yet the difference in size is growing. The smaller one often sits with his eyes closed.

In the afternoon as I walk past the Japanese lantern a blue jay bumps my head. It must be the young one making a mistake, I think. But no, it is the father. From the elm tree he dives at me again hitting my head hard. I can't see the babies or any reason for his attack, but I retreat. Later I walk that way again and bend to pull a weed. Down comes the blue jay to assault the enemy's exposed rear. This time I've had enough, and I stay away from that area until next morning. Under the leaves of a begonia the small blue jay lies dead but unmarked. He must have been dying while his frantic father was doing battle with me in a vain valiant attempt to help his baby. The big brother thrives and grows glossy and long-tailed and brilliant.

Yes, the garden is a place of anxiety and tragedy, of hope and triumph. It resounds with the beseeching cries of the babies, the scolding notes of their parents. In a few more days the young will be able to fend for themselves though they will still look a little awkward and unfinished. Their mothers and fathers will suddenly ignore them, and quiet will prevail until the next broods hatch, fledge, and tumble out of their nests.

With the first red leaf of autumn the young robins will gather together to fly south. The young cardinals will lose their dark indeterminate shade. The self-assured blue jay will bob up and down on a limb and give the clear call of his kind. More tufted titmice and chickadees will appear at the feeder. The blue grosbeak will desert his favorite perch in the top of the old apple tree.

In the crisping air everyone will fly about without the hectic urgency of summer. No fluttering screaming babies will wait impatiently yelling for MORE, MORE. Another turn of the great clock will be accomplished and the vulnerable youngsters will be grown, the instincts of millennia capsuled safe inside their feathered bodies, ready to start the cycle over again when summer returns.

Edited by HARRY GILLAM

### Reverse Catch

Whether this 5 pound 13 ounce bass was running away from L. H. Hawthorne's Webber hackle fly or whether he overshot it in an attempt to grab it we'll never know, but Mr. Hawthorne managed to snag him in the tail fin and land him after a considerable struggle. Mr. Hawthorne had a head start on most Virginia anglers, having caught 409 fish already during the first three months of 1967.

### National Index Reveals Litterbugs May Be Losing Their Steam

Litterbugs are slowing down, according to the National Litter Index published annually by Keep America Beautiful, Inc.

The national litter-prevention organization said that while the 1966 Index showed a small increase in the amount of littering, the rate of increase was less than half of the previous year.

The 1966 Litter Index stands at 106.8, a rise of 1.9 percent over the revised 1965 Index, which stood at 104.8, according to Allen H. Seed, Jr., executive vice-president of KAB.

The Index was established in November 1964 as a method of periodically measuring the litter problem. It is determined by KAB from vehicle miles traveled on primary state highways and the annual cost of clearing the litter from these same highways.

The new Index shows that public education programs are getting results and all litter fighters should take heed.

### Big Gobbler

E. Earl Lynskey bagged this 20 pound gobbler in Fauquier County. It was the largest reported from that county during the fall season.

### April Fool Bass

An April Fool's Day fishing trip by Furman W. Roberts of Alexandria proved to be no joke for this 9 pound 2 ounce bass which couldn't resist his Rapala lure. He landed the big bass in Bournes Mill Pond in Essex County using 6 pound monofilament on a spinning outfit.

### Game Commission Opposes Duck Stamp Increase

The Virginia Commission of Game and Inland Fisheries officially went on record at their March 31 meeting in Richmond as opposing legislation now in Congress which would increase migratory bird hunting fees. The bill, H. R. 14136, would raise the cost of current duck stamps from $3 to $5 and establish a new $2 dove stamp which would be required of all dove hunters 16 years of age or over.

The Commission felt that the duck stamp increase was not justified now in light of the fact that federal monies already authorized for wetlands acquisition have not been spent. It was noted also that the proposed increase would put federal fees a bit out of line with state hunting license fees, many of which are not this high.

The dove stamp funds would be used to finance dove research. The Virginia Commission felt that such research can and should be financed by other means.

The International Association of Game, Fish and Conservation Commissioners voiced similar disapproval of this legislation at their annual meeting in Kansas City, Missouri, last fall.

### Spotsylvania Buck

Fourteen-year-old Dale Alan Garner of Springfield bagged this handsome buck in Spotsylvania County during the past season. The antlers had a 24½" spread.

Edited by ANN PILCHER

## Youth Conservation Club Organized

Game Commission Field Services Coordinator Darrell Ferrell shows Youth Conservation Club members the club patch, which each member must earn through participation in club activities and classes.

A conservation club for 8-15 year-old youths interested in outdoor activities was organized in February by the Fredericksburg-Rappahannock Chapter of the Izaak Walton League of America, the first such IWLA youth club in Virginia. Boys attending meetings on the second and fourth Friday evenings of each month will learn about natural resources and will put their knowledge to work in a practical way. The group will plow, disk, and seed wildlife food patches on IWLA land and will assist with clean-up duties such as trash removal around the fish pond. The Hunter Safety Course will be presented to members, who will have opportunity to fire on the chapter's new range. Boating and fishing techniques and equipment handling methods will be taught. Weekend camping and maintenance of a nature trail will be part of the program.

Wilmer Barnette photo

## Woodbridge Scouts Plant Poplars

On April 8 members of Boy Scout Troop 1149 of Woodbridge planted 1500 poplar trees on IWLA property. Troop counsellor Harold Small. Alexandria IWLA project manager Wilmer Barnette, and IWLA chapter president Vivian Barnette assisted. Planting instruction was given by Darrell Ferrell, Game Commission educational field services coordinator, who also spoke on the value of the tree planting program. Building bird houses and feeding stations for installation on the IWLA property is a future project of the scouts. Game Commission-published instructions for making these houses were distributed by Mr. Ferrell. The 19 scouts who participated in the planting included Johnny and Tommy Flournoy, Steven Payne, John King, Harold and George Small, Steven Hutson, Larry Guest, Terry and Bruce Darland, Erwin Mitze, David and Michael Mohaupt, Scott Courtner, Charles Putnam, Keith Hendrickson, Billy Lowe, Robert and Wilbur Barnette.

## 10 Receive Seed Plot Awards

Each year the South Hill Ruritan Club sponsors a wildlife food contest for boys and girls in the South Hill and Buckhorn communities, which results in five prizes for each community. Thirty-eight boys and girls participated in the 1966 contest, and according to the judges it was a difficult task to choose winners.

Right: Winners of the 1966 Wildlife Food Patch Contest sponsored by the South Hill Ruritan Club in the South Hill and Buckhorn communities, seated left to right, are Debbie Crowder, March Lynch, Ronnie Reekes, and Jackie Gordon. Standing, left to right, Brunswick County Game Warden Jerrold E. Fry, who presented the awards; Donald Curtis, Rachael Newman, Bernard Watson and Stuart Newman, Game Commission Education Field Services Coordinator and chairman of the Ruritan Conservation Committee. Winners not present were Randy Turner of South Hill, Donald Puryear and Curtis Wells of Buckhorn.

Left: Troop 1149 scouts get "on with the planting" under direction of Darrell Ferrell.

## Coaches Receive Hunter Safety Certificates

Photo courtesy Manassas *Journal Messenger*

Last winter 2,100 students in Prince William County high schools completed the hunter safety course, and 20 coaches from six county schools became qualified as hunter safety instructors. Above, county game warden Walter Flory, center, presents certificates to instructors John Moyer, William Wood, Harry Coleback, and Joe Hockman, of Stonewall Jackson High School in Manassas. Course sponsor was the Prince William Izaak Walton League. County merchants donated funds for purchasing patches, certificates and cards for those completing the course.

To climax the contest, winners were entertained by the club at the South Hill Motel and Restaurant. Jim Pack, Game Commission biologist, presented a slide talk of the work being conducted at the Elm Hill Wildlife Refuge near Bugg's Island Lake in Mecklenburg County.

Courtesy *South Hill Enterprise*

Edited by JIM KERRICK

### Preventive Maintenance

Preventive maintenance is a common term in our modern society. It suggests that a thorough inspection is made regularly to prevent problems before they can develop.

Preparation for boating often centers on taking a good look at the outboard motor. Time spent in making a preventive maintenance inspection will be well repaid by uninterrupted fun afloat.

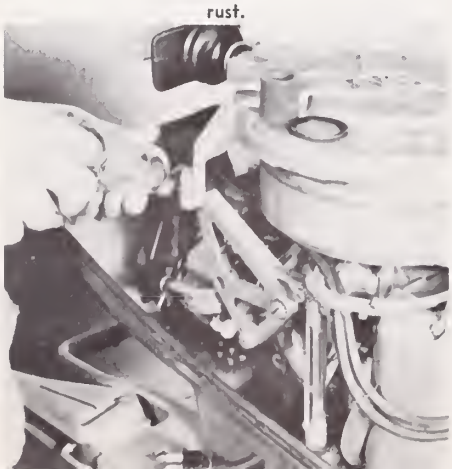
Spring is a good time to take a thorough look at your outboard. The following recommendations will provide a useful servicing procedure for the handy boater.

First, remove the cowling and clean the outboard thoroughly, including all accessible powerhead parts. Then take out the spark plugs and rotate the crankshaft by operating the starter in order to remove oil deposits that form in the cylinders and crankcase during prolonged storage. Inspect the manual starter rope for wear.

Owners of outboards equipped with electric starters should have their batteries tested and recharged before using. During the summer battery water level should be checked monthly.

Another important step is the inspection of spark plug leads for damage or deterioration, particularly where insulation comes in contact with metal parts. Check spark plug electrodes; if they're reusable, reset the electrode gaps to manufacturer's specification. Be careful when replacing plugs not to damage the threads in the cylinder block. After seating a plug fingertight on gasket, a ½ turn more with a wrench will generally be sufficient to tighten. Be sure to reconnect each spark plug lead to its proper plug.

Filter bowl should be cleaned of all dirt and rust.



Remove rust and chipped paint from painted surfaces, then touch up if necessary.

Check all fuel lines and fittings for damage or loose connections. Clean the fuel filters on the engine and in the fuel tank.

Fuel tanks, whether separate or integral, should be examined carefully. Make sure each tank is clean, free of rust and leakfree.

Refer to the owner's guide for lubrication points and lubricate as directed. A grease fitting located under the swivel bracket is often overlooked. Apply good quality marine grease to this fitting.

Before replacing the cowling, check your outboard thoroughly for loose, damaged or missing parts. Tighten or replace as required.

Periodically lubricate the lower drive unit with gear lubricant recommended by the manufacturer. After removing the vent and filler hole screws and gaskets, add lubricant through the filler hole until it starts to come out the vent hole. Before replacing the vent screw and filler hole screw, make sure the gaskets under the screw heads are in place; otherwise, water may leak past the threads into the gear housing.

Check the water inlet ports and the telltale opening to make sure that cooling water flow to and from the engine is unobstructed.

Remove the propeller and inspect the blades for cracks or bends and check the hub for possible damage. Trim nicks and burrs with a file, taking care to remove as little metal as possible. Before reinstalling the propeller, lubricate the propeller shaft splines with a waterproof lubricant (such as Quicksilver Anti-Corrosion Grease). This is particularly important if you operate in salt water, as it facilitates removal of the prop later on.

Because the modern outboard engine starts so easily, it's a wise precaution to place a block of wood between the anti-cavitation plate and the propeller whenever installing or removing the propeller shaft nut. This will prevent accidental starting.

If your rig has remote controls, check the cable operation and lubricate the linkage. In the event they are not functioning properly, take up the matter with a qualified mechanic.

To complete your personal servicing work, retouch any damaged or scraped painted surfaces. A clean, well-preserved outboard reveals a careful owner who believes in advance preparation for boating activities.

Carburetor cleaning, magneto inspection and breaker point adjustments to the manufacturer's specifications by your outboard dealer will add many more trouble-free hours of boating pleasure.

But don't wait until he's flooded with work; visit him now!

The propellor should be free of nicks and cracks, and replaced if bent.
Copy and photos courtesy Evinrude Motors

# Bird of the Month:

By DR. J. J. MURRAY
*Lexington*

THE British cuckoo is famous for its "cuc-coo" call, repeated over and over again. Our cuckoo belongs to the same general family. We have two species in Virginia, yellow-billed and black-billed. Oddly enough the grotesque but famous road-runner of the arid Southwest, though very different in appearance and in habits, is an aberrant relative.

Our two cuckoos can easily be distinguished when one gets a good look at them. Unfortunately, they are secretive birds, staying as much as possible in the shelter of thick trees, much more often heard than seen. Both are brown above and clear white below. The yellow-billed cuckoo shows reddish in the wings and has a yellow lower mandible, while the black-billed lacks the wing color and has both mandibles black. The best mark, easily seen when the birds are in flight, is the size of the spots in the tail. In the yellow-billed bird they are large, while the black-billed bird has small spots. Both are slender birds, measuring twelve inches or more in length, with long tails.

The calls are similar, a series of "kuk-kuk-kuks," but the pattern is different in the two species, the yellow-billed slowing up the speed of the calls near the end of the series. I have heard the yellow-billed cuckoo call in the middle of the night, but the calls then are slower, a "cowoo—cowoo—cowoo." I have even heard a bird calling while sitting on the eggs, which seems a foolish and dangerous practice. Nevertheless, two of the four eggs hatched.

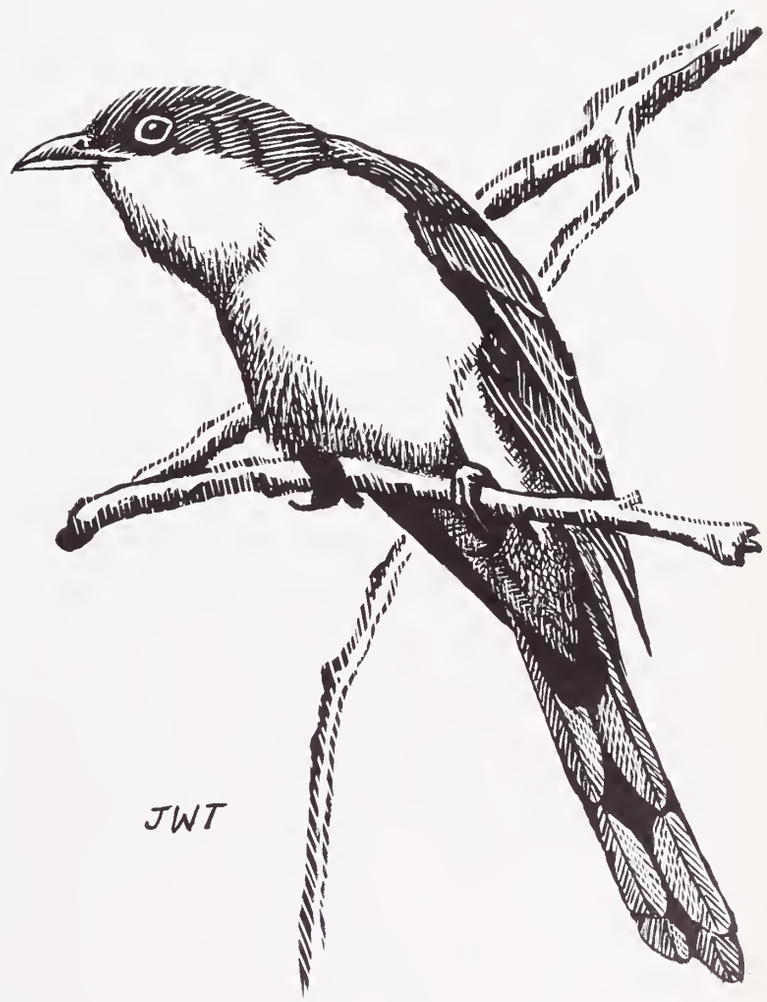
This bird builds such a poor nest that often the eggs may be seen from below through the twigs. The nest is made of sticks loosely laid together and lightly lined with softer materials. The number of eggs in the nest varies greatly, sometimes only two, sometimes as many as six or even more. They are pale bluish-green in color.

The nest, usually rather low, may be placed anywhere from 6 to 40 feet from the ground. I once found a nest only four feet up in a small cedar. Another was 40 feet up and 15 feet out from the trunk on a limb of a deciduous tree. It may be placed in a tangle of vines, in a sapling, in a pine or a cedar, or in an open tree. Nests with eggs may be found from May 13 to August 1. One was found at Mount Vernon with small young on September 21. I believe that two broods are normal in Virginia.

It takes about 14 days of incubation for the eggs to hatch. Few birds are as ugly at hatching, naked, purplish-black, with bright blue feet and legs and bill, and with only a few hairs on the back.

These birds reach our state in late April. The latest date we have for Virginia is October 25, it having been found on that date at both ends of the state, at Norfolk and at Lexington.

Since the cuckoos feed largely on caterpillars, and only to a small extent on wild fruits, they are almost entirely beneficial species. In the swollen stomach of a black-billed cuckoo I once counted about 50 grasshoppers.




# Yellow-billed Cuckoo

# ARE YOUR BOAT NUMBERS DISPLAYED CORREC

**THERE MUST BE A HYPHEN OR EQUIVALENT SPACE BETWEEN THE 3 PARTS OF NUMBER**

*RIGHT*

VA-1234-Z
VA 1234 Z

*WRON*

VA1234Z

**OF A COLOR CONTRASTING TO THE BACKGROUND**

*RIGHT*

1 2 V A

*WRONG*

◎ 1 3

**BLOCK CHARACTERS OF GOOD PROPORTION NOT LESS THAN 3 INCHES HIGH**

*RIGHT*

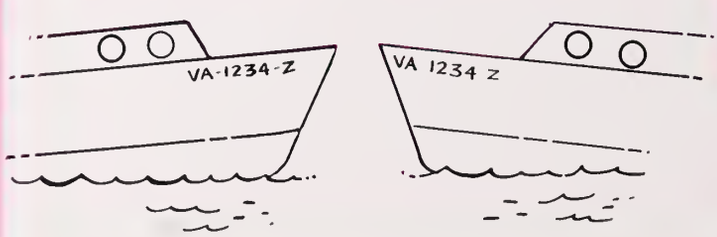
V A

*WRONG*

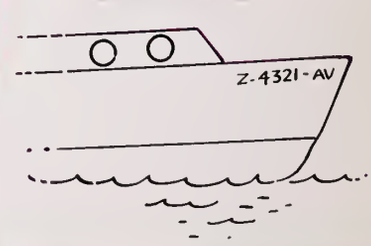
V A 1 2 a

**PAINTED OR ATTACHED TO EACH SIDE OF BOW READING FROM LEFT TO RIGHT**

*RIGHT*




*WRONG*




VIRGINIA COMMISSION OF GAME AND INLAND FISHERIES
RICHMOND, VIRGINIA